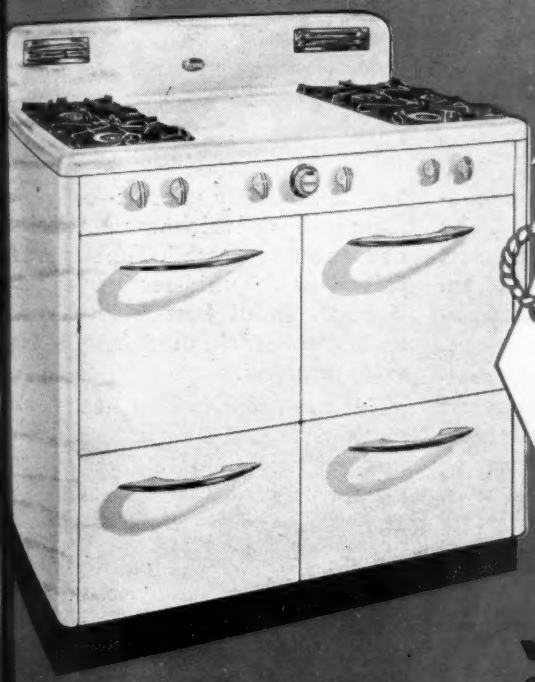
PROPERTY OF THE
SEATTLE PUBLIC LIBRARY

BUTANE-PROPANE News

THE RECOGNIZED AUTHORITY OF THE
LIQUEFIED PETROLEUM GAS INDUSTRY

Technology

This is one
of the new

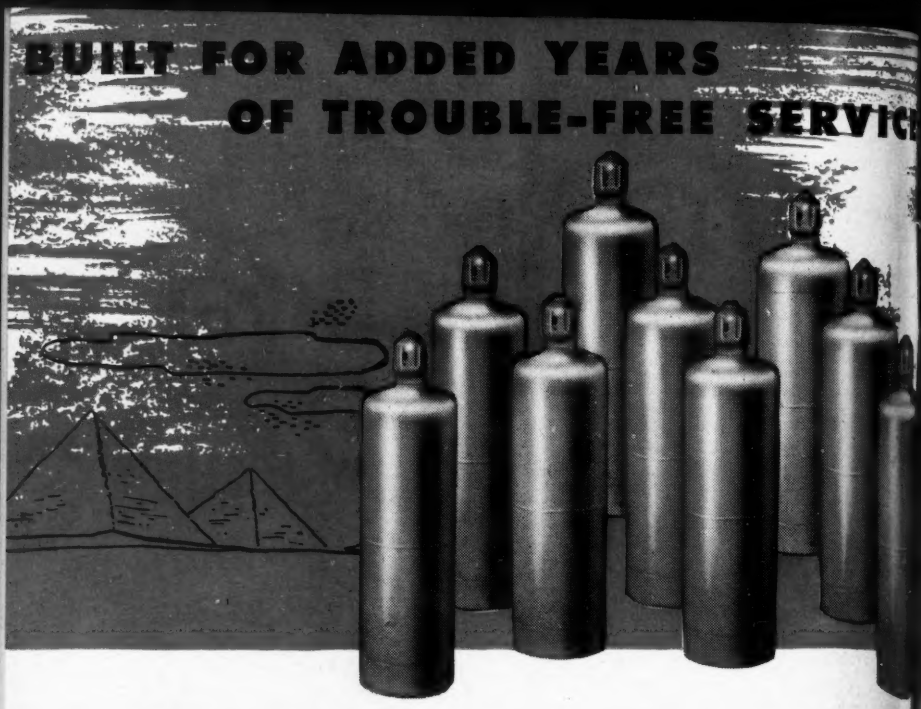


Grand
GAS RANGES

for Natural, Artificial or L. P. Gas

which will be ready
for you during the
last quarter of 1945

GRAND HOME APPLIANCE CO.
2323 E. 67th STREET • CLEVELAND 4, OHIO



To assure long life—design and construction must go hand in hand. Take Hackney L-P Gas Cylinders, for instance. They're built to last—to afford maximum economy in the storage and transportation of Propane and Butane.

The Hackney 2-piece cylinder developed by Pressed Steel Tank Company permits the production of the lightest weight cylinder possible under existing ICC specifications and consistent with service requirements. Two seamless shells are pressed and drawn to shape by the Hackney process—assuring form side-wall thickness and elimin of defective material. The two shell joined at the mid-section by a s circumferential butt weld—X-ray trolled to assure uniformity and mum strength.

Each cylinder is heat-treated in matic time and temperature contr furnaces after complete fabrication proper physical properties of both and weld are therefore assured. Write today for full details.

Pressed Steel Tank Company

Manufacturers of Hackney Products

1487 South 66th St., Milwaukee 14
208 S. La Salle St., Room 2069, Chicago 4 552 Roosevelt Bldg., Los A
1399 Vanderbilt Concourse Bldg., New York 17

Hackney MILWAUKEE

CONTAINERS FOR GASES, LIQUIDS AND SO

PROPERTY OF THE
SEATTLE PUBLIC LIBRARY

IT'S HOT CLEAN HANDY ECONOMICAL

Anchorgas

The one all-purpose Butane-Propane—for cooking, heating and many Industrial uses.

ANCHOR
Petroleum Company
Tulsa, Oklahoma
PRODUCERS & MARKETERS

BUTANE-PROPANE *News*

Reg. U. S. Pat. Off.

Contents for November, 1945

Publication Office

LOS ANGELES (14)—1709 W. Eighth St.
Phone: DRexel 4337

Branch Offices

CHICAGO (3)—1064 Peoples Gas Bldg.
Phone: WABash 2589

NEW YORK (17)—50 East 42nd Street
Phone: MURray Hill 2-4504

WASHINGTON, Editorial Office—
306 National Savings & Trust Bldg.
Phone: DIstrict 0215

Editorial

LYNN C. DENNY, Editor
ELLIOTT TAYLOR, Washington Editor
H. W. WICKSTROM, Technical Editor
PAUL LADY, Assistant Editor

Executive

JAY JENKINS, President
ARTHUR ROHMAN, Vice President
JAMES E. JENKINS, Secy.-Treas.
ROY D. CRIPPEN, General Manager
L. V. HOHL, Eastern Manager
DAVID CARMEN, Mid-West Manager

November, 1945. Volume 7, Number 11. BUTANE-PROPANE *News* is published monthly. Copyright 1945, by Western Business Papers, Inc., at 1709 West Eighth Street, Los Angeles 14, California. Subscription price: United States and U. S. Possessions, Mexico, Cuba, South and Central American Countries (in advance), 25c per copy, one year $1.50; three years for $2.50. All other countries $3.00 per year. Entered as second-class matter May 29, 1939, at the post office at Los Angeles, California, under the Act of March 3, 1879.

Member of Audit Bureau of Circulation; Associated Business Papers, Inc.

Publishers: GAS, The *Natural* Gas Magazine; HANDBOOK BUTANE-PROPANE GASES; THE BOTTLED GAS MANUAL; WESTERN METALS; CATALOG BUTANE-PROPANE APPLIANCES AND EQUIPMENT.

LETTERS

Have you service or operating problems? Submit them to us and our technical department will endeavor to help you.—Ed.

•

Gentlemen:

I am contemplating a change from coal, stoker fired, to propane gas in a hot water boiler for heating my house and wonder if you will give me some information.

I have an eight room frame house fully insulated and heat it with a boiler, stoker fired. I burn about 8 to 10 tons of eastern Kentucky coal in about seven months of the year. Last winter I burned 8 tons.

Can you give me the approximate number of cubic feet it should take per month to keep the temperature at 70° F.?

C. O. L.

Iowa

It is assumed that your automatic stoker is modern and giving an efficiency of 70%. On this basis, and assuming 70% efficiency for a gas installation, your consumption would be about 13,400 cubic feet per month.—Ed.

•

Gentlemen:

We are entering the manufacturing of propane equipment and would appreciate any information you could convey to us in regard to regulations and specifications of propane equipment.

Are there any national safety regulations or rules that have to be complied with? Is it under state control?

F. S.

Connecticut.

Many individual states have statutes covering transportation, storage, and utilization of liquefied petroleum gases and equipment used in connection therewith. Other states have delegated certain supervisory powers in the same matter to state fire marshals without very specific instructions.

The code nationally followed in the manufacture of this kind of equipment, as well as for transportation and storage of the fuel, is that of the National Board of Fire Underwriters, and a copy of these standards may be obtained from the National Fire Protection Association, 60 Batterymarch St., Boston, Mass. The National Board of Fire Underwriters has an office at 85 John Street, New York City and that office will also supply you with the code.

In interstate shipments of cylinders, the Interstate Commerce Commission Code must be followed and copies of it can be obtained from the Interstate Commerce Commission.—Ed.

•

Gentlemen:

Do you have a list of all the bottled gas dealers in the state of Ohio? If so, we would appreciate it very much if you would forward a copy to us.

R. H.

Ohio

If you will refer to our Bulk Plant Directory you will find the names of all large bulk plant owners in Ohio.—Ed.

•

Gentlemen:

We have had very good luck in the past with positive displacement pumps when mounted on truck units or in a stationary position and used to fill both underground and above ground systems which are equipped with a vapor equalizing connection in order that the head against which the pump has to work may be held to a minimum.

We have of late fabricated a great many of these units for the handling of propane, which in the main is dispensed into ICC cylinders which are equipped with only a filling connection and do not have a vapor equalizing connection. Therefore, these

pumps under such service are not rendering satisfactory service, and we feel that there is probably some better type of pump or means of filling these cylinders rather than the use of a standard positive displacement pump equipped with by-pass, etc.

H. W.

Texas

The ICC cylinder was designed for filling at a central plant. If tanks of ICC construction are filled at the point of use it is necessary that they be equipped with a gaging device and a back pressure check valve on the filling connection (NBFU No. 58).

As these items are not standard, cylinders to be filled at the point of use are specially fitted and should have a vapor return hose connection and an inlet valve that allows for filling without excessive pressure drop.

It is immaterial whether propane or butane is being handled if the proper vapor return connections have been made. We do not consider it good practice to fill cylinders from trucking equipment that are not specially fitted for this type of delivery.

Difficulty will be experienced with any rotary pump when the rate of flow is greatly reduced from the rated flow, requiring a large percentage of by-pass unless the by-passed liquid is returned to the tank and not to the pump suction.—Ed.

•

Gentlemen:

I desire to find out immediately the name of some manufacturer who produces high grade burners which could be used in the furnaces of two of my customers who have been heating their residences with coal burner furnaces which furnish heat for hot water systems. They desire to discontinue the use of coal and put in first class butane gas systems, or rather to put in a first class butane gas burner in the furnace to furnish heat for their hot water system.

E. Y.

Mississippi

You will find among the advertisers in BUTANE-PROPANE *News* the names of burner manfacturers who can supply your wants. You should also write to floor furnace manufacturers.—Ed.

Gentlemen:

I am contemplating entering the liquid gas business as a distributor. Having had no previous experience in this field of activity, I am asking for any advice you might offer as to what steps would be advisable to take. Perhaps you could tell me what petroleum company would supply me with fuel in this area.

You might also be able to inform me as to what manufacturers I might contact in securing adequate supplies, equipment, etc. I shall be anxiously awaiting your reply.

C. H.

California

There are several books, published by us, which you most definitely should have to acquaint you with the fundamentals of this industry. They are:

"Handbook Butane-Propane Gases."

"The Bottled Gas Manual."

"1945 Catalog of Butane-Propane Appliances and Equipment."

"BUTANE - PROPANE *News*." (Published monthly.)

"Standards of the National Board of Fire Underwriters, Pamphlet No. 58." (The National Safety Code, which may be had by writing to the National Board of Fire Underwriters, Merchants Exchange Building, San Francisco.) Free of charge.

The advertisements of fuel suppliers and equipment and appliance manufacturers will be found in BUTANE-PROPANE *News* and the Catalog.—Ed.

•

Gentlemen:

Would appreciate any information available on comparisons of B-P gas and charcoal—heat content, efficiency, relative cost to accomplish same job —and any other data of record.

C. C. W.

Texas

The efficiency of charcoal burners for domestic cooling would be low and propane is competitive to charcoal for this use.

We are sorry we have no detail information but it is possible some of our readers may have had experience along this line. We will inquire through our "Letters" column and let you know if we hear anything further.—Ed.

COMMENT

HERE are some figures to cogitate upon:

There are 14,320,000 American homes without baths; 6,000,000 lack adequate plumbing; nearly 19,000,000 are without mechanical refrigeration; 19,802,230 do not have central heating; nearly 45% are still cooking with wood, coal, kerosene or gasoline.

So says Roy C. Ingersoll, Borg-Warner Corp.

And some B-P Gas dealers are wondering where they can dig up a prospect!

•

Safety should everlastingly be the watchword of our industry. It's not just a word to be mouthed. Keep it actively in your minds for your own good and to maintain the really fine record already attained.

The last chapter of the Philgas safety program for employes appears in this issue, and, unless you want to learn the hard way, you might review the whole series with your employes.

•

Gas refrigerators for Christmas! That is the expectation of Servel, Inc. Production is getting under way and will be at full speed by January, it is hoped.

There will be five models in De Luxe and Standard 6 and 8 cu. ft. sizes and a 4 cu. ft. apartment size. No price announcements yet.

•

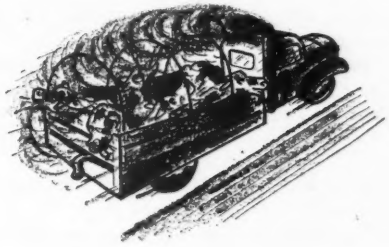
Next time you rumble over a corrugated iron culvert you will recall C. C. Turner's article on how these are manufactured with the aid of B-P Gas. (See page 42.)

Then, if you are smart, you will find an industry in your own home town that uses dies and cutters and punches—be it a manufacturer of culverts or other steel shapes—and pick up a new gas load for yourself.

•

Did you ever get stuck behind a diesel truck on a long grade? Then you can understandingly pity the poor cattle and other stock shipped to market in diesel-burning trucks. The sickening fumes literally send them to the hospital.

Shrewd livestock shippers are converting their diesel engines to burn



butane or propane and bring in their cargos in top condition. Save money, too. If you don't believe it, read Paul Lady's article in the "Power" department.

•

First, war restrictions on production of B-P Gas and now strikes, domestic misunderstanding and maladjustment.

•

One hears again the magic word, "Sales."

Lost in the din of war and limita-

tion orders, thoughts or references to selling were almost a sacrilege.

Now we are trying to adjust ourselves to the realization that we can again go out and sell anything we like (even if deliveries may be slow).

As nearly everything else changed during the war, we thought probably sales procedures and rules might be different. So, we looked around, asked some questions, read current advertisements and listened to a cut-and-dried speech from the first house-to-house peddler we have found on our front porch in nearly four years.

What is the conclusion? There's nothing newer in selling than in the excuses of a man late for dinner. There always has been and always will be just two things to do on the sales front—tell a straightforward, truthful, intelligent story, and tell it to a lot of people. That's a success recipe for any man, selling any product.

And there's no product that you can tell the truth about as easily as gas—but can you work?

•

Do you need an expert in your business?

There are a lot of them available from the War Production Board roster—men who gained vast knowledge of industry, accounting and finance, market analysis, manufacturing and distribution while in government employ during the war, and are now ready to enter private enterprise.

Write the Industry Personnel Committee, 2060 Railroad Retirement Bldg., Washington, D.C.

•

The years 1940 through 1944 marked the greatest expansion of industry (manufacturing, mining and construction) of any five-year period in the history of the country, stated the War Production Board before it recently became extinct. Industrial output more than doubled.

Long-term average previously was 4% per year; 7% annual increase during the first world war; 8 to 12% rate during most rapid peace expansion.

•

Five hundred thousand matches are lighted every minute in the United States. That's 800,000,000 daily.

Misuse and careless handling of matches, especially by smokers, cause more fire damage than any other hazard. From matches, alone, annual fire damage amounts to $17,500,000.

Can you help do something about this?

•

Here are figures estimated to represent the production now required for important items to make up for production lost between Pearl Harbor and V-E Day, according to Chas. E. Sorensen in the November issue of "The American Magazine":

15,000,000 automobiles.
48,000,000 radios.
12,500,000 refrigerators.
7,000,000 washing machines.
96,000,000 clocks and watches.
7,000,000 vacuum cleaners.
19,000,000 electric irons.
12,000,000 furnaces and heaters.
9,000,000 toasters.
16,000,000 stoves and ranges.

B-P Gas dealers can cash in on a lot of this!

•

Women are making good as distributors of propane and butane, as well as in other lines. It's surprising how many are conducting their own business—successfully.

There's a real human interest story in the experiences of Winnie Stee of Missouri, to be found in this issue.

Who—man or woman—has a better story to tell?

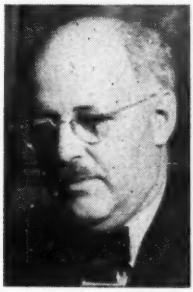
By Ed.

MAINLY BEYOND THE MAINS

By ELLIOTT TAYLOR, Washington Editor

REA Dwindles

It would appear that the beginning of the end is in sight for the long program of new rural electrification that has been carried on by both the Rural Electrification Administration and the electric utilities companies.



ELLIOTT TAYLOR

Like all government agencies, however, the REA hates to give up even when its job is about finished, so its friends in Congress are trying to put through a bill that would grant the administration lending authority up to $585,000,000 for three years, ending June, 1948, plus $5,000,000 a year to make free surveys for proposed rural electrification cooperatives.

It appears from testimony presented by an electric utility executive, president Grover C. Neff, of the Wisconsin Power and Light Co., that the REA has $300,000,000 already available, which sum he regards as ample to finance electric service to 700,000 farm homes in the next three years.

During the same period between now and 1948—he says the electric companies plan to run lines to 600,000 farms in addition to those that REA service will reach. This will complete the program of reaching the 4,400,000 farms that are regarded as practical prospects for service.

There is no disputing the fact that in bringing electricity to farms that have been denied its benefits the REA has rendered rural America a great and lasting service. There is also no disputing the fact that if the electrical industry had been ready to assume the responsibility for bringing service to remote places at reasonable costs, there would have been much less need and less enthusiasm for the cooperative type of service popularized by the REA.

Spurred on by spectacle of government-sponsored extensions stepping into the market that many had been regarding with complacent indifference, the utilities themselves went to work on the rural load, once REA had stepped into the field. As a result, while everyone heard about the achievements of the REA in putting in 915,000 new farm services of cooperative lines in the nine years from 1935 to 1944, few realized that

in the same period private utilities had done better by about 10,000 meters, bringing electric service to 925,000 farms.

In the period of greatest expansion, which ended in 1941, REA brought service to 600,000 farms at a cost of $272,000,000.

The figures presented by the witness indicate that the time has come for REA to wind up the extension aspects of its program. That it now wants more funds than it will need is a characteristic of all federal bureaus which seek to perpetuate themselves while looking around for new jurisdictions and new authorities.

The REA has already been criticized for its tendency to crowd co-ops into ambitious projects that have little or no relation to the purpose of their primary undertaking. The only way to effectively curb the administration's ambition is to cut it back at the pocketbook level.

But whether REA starts to level off this year or three years from now, there is no reason why liquefied gas sales into rural communities should not continue their upward trend. It is well to note that during the years just prior to 1941, when rural electrification was hitting its top stride, the sales of liquefied gas for domestic consumption were advancing at a phenomenal rate, with an average increase of nearly 50% per year for the period.

It is obvious that so far the record of the butane and propane industry has been one of successful competition with electricity for domestic fuel uses regardless of whether the power supply was government subsidized or privately supplied.

With the prospect of cheaper fuel in sight, with new and superior gas appliances being designed to burn either butane or propane, and with orders on the books for new service that will at a conservative estimate keep dealers and distributors working at top speed for six months after ample supplies become available, we see no reason to doubt that the spectacular accomplishments of pre-war merchandising will be repeated or eclipsed in the period that lies just ahead.

Quite An Accomplishment

The intra-mural wrangling that goes on in the liquefied gas household gets a little noisy at times and we have no doubt that echoes of some of the livelier slugfests must carry out to where they can be heard from the street. We recognize that a good row is generally regarded as highly newsworthy by the neighbors, but on the other hand no self-respecting family

wants to be judged solely on the ferocity and volume of the brawls that its members occasionally stage.

In association ranks right now there are some briskly divergent differences of opinion being expressed as to the relative merits of various conceptions of association activity. Some of the arguments make interesting listening, but to the ordinary liquefied gas operator who may or may not belong to any association, first reaction is likely to be in the vein of the classic observation, "A plague on both your houses."

But in the long run the value of any trade organization is judged by the good that it accomplishes for the industry served, and not by the entertainment and amusement that its mistakes may provide for the onlookers. For that reason it should be a source of both satisfaction and pride to the technicians of butane-propane operations that the Liquefied Petroleum Gas Association's sub-committee on the revision of NBFU Pamphlet 58 has completed its labors, and the material has been turned in to association headquarters for the final editing.

The prosaic title of Pamphlet 58 should not lead us in any way to discount the significance of this work to the liquefied gas industry. For it is the basic work on which most state laws governing any phases of design, construction or installation practice affecting butane and propane are based. Its adoption by the National Board of Fire Underwriters gives it additional weight in that buildings accepted for insurance by board members must conform to the rules of Pamphlet 58 if liquefied gas is installed.

The long and painstaking devotion to the project of rewriting this work so that it is brought up to date with what are believed to be the best and most modern practices recommended for gas installations, has fallen on the shoulders of, first the Technical and Standards Committee, and then more recently a separate Pamphlet 58 committee headed by Walter Verkamp with a subcommittee on revision under the chairmanship of Mercer Farrar.

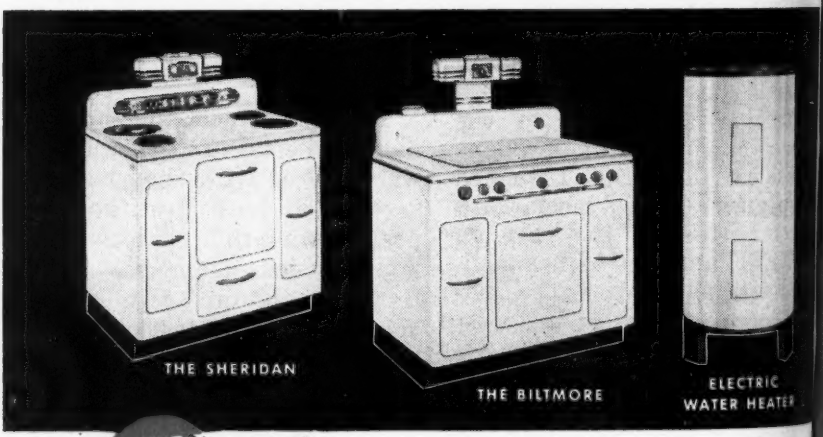
These chairmen, and the technical experts of the industry who labored with them, are deserving of both gratitude and praise from their associates in liquefied petroleum gas operations. It is our own studied opinion that the lasting contributions made by those who are willing to work in almost complete obscurity for industry advancement will remain as assets to be prized long after the rival pretentions of goalless leaders have been forgotten.

"Pie!"

Of all the pies you've ever ogled with wide-eyed anticipation, none can quite compare to the luscious pie we've cooked up for aggressive home appliance merchants. "Profit-Pie," we call it — L&H Profit-Pie! Just how is it made? Why is it so good? What makes it so tempting? Here's a recipe that adds new zest, new greatness to a time-honored household favorite — and you don't have to be told twice to recognize it!

We've taken a seasoned reputation for quality products, a very generous portion of customer-goodwill, an attitude of progressiveness, a complete line of up-to-the-minute cooking and heating appliances, added an aggressive sales and merchandising program, and baked it to a rich, golden hue. And we've come up with the tastiest sales-and-profit dish imaginable. It's hard to beat 70 years of alert, successful experience, like L&H's.

Appliance merchants who have featured L&H products know what it means to enjoy the glorious flavor of L&H "Profit-Pie." Theirs is the enthusiasm that comes from first hand knowledge. Get a taste for some yourself. There's a big, savoury slice of it waiting for the dealer with an honest-to-goodness appetite for profitable sales. Just say the word and we'll gladly tell you the complete L&H story.

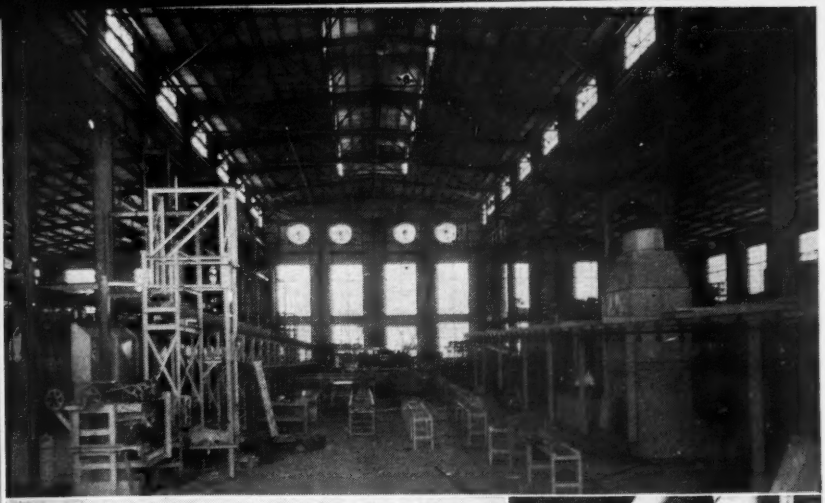


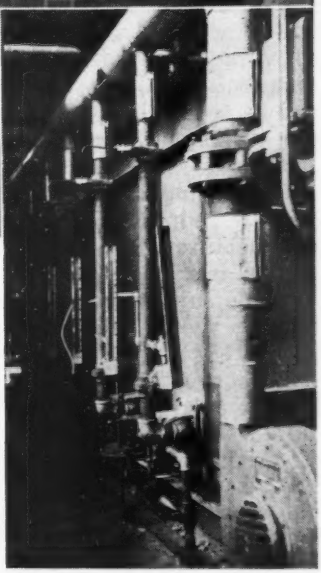
KEROGAS L&H ALCAZAR

A. J. LINDEMANN & HOVERSON CO.

MILWAUKEE 7, WISCONSIN

Manufacturers of ELECTRIC RANGES • ELECTRIC WATER HEATERS • GAS RANGES • OIL STOVES • PORTABLE OVENS • OIL HEATERS •





Bomb Shells— Heat Treated with Propane

LIQUEFIED petroleum gases have had many uses during the war years, some of which are now coming to light as the necessary military secrecy is lifted with war's end.

One installation of interest is that of the American Machinery Co. bomb plant at Orlando, Fla. Serviced by Natural Gas & Appliance Co., of Orlando, a Green's Fuel distributor, this plant made 500-lb. bombs for the government.

The bombs were heat treated in special furnaces erected for that purpose and the operation called for 15 cars of propane a month.

E. R. Whittle is the manager of the Natural Gas & Appliance Co.

UPPER: Inside view of American Machinery Co. bomb plant, showing production line of bombs through furnaces.

LOWER (left): Outside view of plant at Orlando, Fla.

LOWER (right): View of the burner side of furnaces.

Proper Sizing and Location

Of Automatic Storage Gas Water Heaters

IT IS generally recognized that hot water service in many homes in the past has been inadequate. If this trend is not halted, future hot water service will tend to be still more inadequate.

This is because hot water usage should and probably will increase, due to new and greater knowledge concerning sanitation, and to the temperatures of hot water which will be needed because of the wider use of automatic laundry machines and dishwashers in the near future.

The accompanying chart has been heartily approved by utilities, manufacturers and other segments of the industry. Use it in every sale! Be sure your customers realize the proper importance of an adequate supply of hot water in their homes and purchase heaters large enough to do the work required.

Basis For the Chart

1. The chart is based initially on the fact (generally accepted by the industry) that no heater of less than 30 gallon storage capacity supplies adequate hot water to meet normal average domestic requirements.

A. Automatic laundry machines require from 20 to 30 gallons of hot water in a period ranging from 30 minutes to one hour.

B. Many automatic dishwashers require hot water at the rate of 1½ to 2 gallons per minute, or 6 gallons per load.

C. Minimum quantities of 140° F. water required for common tasks.

(A) Tub Bath—15 gals.

(B) Shower Bath—3 gals. per min.

(C) Laundry Washing Machine (non-automatic)—12 gals.

THE PROPER SIZING and location of automatic gas storage water heaters is a particularly timely subject in view of the potential activity in the home-building field. Up to this time little had been done on this problem, but now a committee on Water Heating and Sizing of the Pacific Coast Gas Association Water Heater Council has produced the accompanying sizing chart which, if used by the industry as a whole, will benefit manufacturers, utilities, dealers, and salesmen, but more especially the users of automatic gas storage water heaters.

The work on this water heater project was started last January by the Water Heater Council of P.C.G.A.'s Sales and Advertising Section and has as its chairman Clyde Potter, commercial manager Southern Counties Gas Co., Los Angeles, and as its co-chairman Claude Ballinger, Republic Heater Co.

Under the Water Heater Council, two sub-committees were appointed, the first of these, the Water Heating Sizing Committee, with Mr. Ballinger as chairman, developed the sizing chart. A second sub-committee on Water Heater Promotion has as its chairman R. V. Davis.

This committee produced the pamphlets on water heater sizing and suggestions for the location and installation of water heaters which are reproduced herewith.

This material on Water Heater Sizing, Locating, and Selling, which has been approved by the Pacific Coast Gas Association and which BUTANE-PROPANE *News* is privileged to pre-view in this issue, will be distributed to the trade in pamphlet form.

—Editor.

(D) Rinse—6 gals.
(E) Dishes (manual)—3 gals.

It can therefore easily be seen that a 20 gallon heater with an input of 20,000 b.t.u. per hour heating water from 60° to 140° could not supply hot water for two tub baths at the same time. This heater can produce only 22.6 gallons of 140° water in an hour and thus any emergency or unusual need for hot water could not be supplied without waiting for the heater to catch up.

2. The chart recognizes that the life of an adequately sized water heater with normal usage is much greater than that of an undersized heater which is constantly overworked.

Some manufacturers of automatic laundry machines, recognizing that most homes have inadequately sized water heaters, have recommended water temperatures of 160° F. to permit greater dilution and thus more water. Only in this manner can enough hot water be obtained from a too-small water heater to do a satisfactory job, but temperatures of 160° F. accelerate liming and shorten the life of the heater.

3. The chart is based on the capacity of the house rather than on the number of persons who may be occupying the house at any given times. This assures adequate hot water service for guests, changes of tenants, and emergencies.

4. The chart recognizes that the importance of hot water service justifies a size of water heater that will permit simultaneous use of the majority of hot water fixtures installed in a house.

How to Use the Chart

1. Use the proper approach in your store or in the field.

A. Inquire of the prospect the number of bedrooms and bathrooms in her home.

B. Find out about any unusual uses for hot water: number of children, etc. (in connection with the above inquiries, allow the prospect to talk about her home—stimulate her pride in it—show interest—compliment her.)

After obtaining all of the necessary information, show the prospect the chart. Be sure you make clear to the prospect that this is an "industry" chart. Point out the endorsements and stress the fact that these recommended sizes are based on many years of experience.

2. Select the proper size heater from the chart. If any unusual requirements exist, stress to the prospect that this is a minimum recommendation and step up one size.

None of this procedure should replace the "selling" of a water heater. After selecting the proper size of heater, a good sales presentation of the heater must be made. This is not intended to be a guide to good salesmanship and therefore it does not treat with that subject.

However, your presentation should stress continuously the importance of adequate hot water service and should include facts which will generate a greater appreciation of the service provided by a quality gas water heater.

Field men can use the chart to excellent advantage. They can make their own inventory and demonstrate to the prospect where hot water is needed and the demands of each plumbing fixture. Field men can make on the spot suggestions for obtaining better

hot water service. They can and should recommend the best installation.

This type of service will be appreciated and will be profitable.

Obstacles

1. "I've always gotten along with a 20."

This might be handled in several ways. If the present "20" has had a relatively short life, point out that it was probably overworked. Find out if hot water usage in the home has increased or if there have not been occasions when they ran out of hot water.

2. "It's more money than we want to pay."

Point out the longer life which may be expected from an adequately sized heater. In some instances show the cost per gallon for the size the prospect wants to buy and for the one you want to sell. Usually larger sizes cost less per gallon.

3. "We have no room for a larger size heater."

If a good sales job is accomplished, you may be able to convince the prospect that the heater should be relocated or that slight alterations are all that are necessary.

4. "Won't it cost a lot to operate?"

Prospects should realize that it costs less in the long run to own a good heater, adequately sized, than a cheap heater, too small, one that is being constantly overworked. The operating cost is very little if any more. It is not appreciably more costly to maintain 40 gallons of hot water than 20 gallons.

Conclusion

The members of the automatic gas storage water heater industry have provided a real service to users of this equipment by making it possible for them to know what size water heater to purchase.

Utilities, manufacturers, dealers, and salesmen have to provide sound information to their customers if they are to serve them properly. When, in addition to doing a good job, a dealer can make a legitimate profit and at the same time add another satisfied customer to his clientele, then the dealer has double reason to employ the tools making this possible. This sizing chart is such a tool—its everyday use means better sales.

Use this sizing chart and secure your share of this very satisfactory business.

Location and Installation of Automatic Gas Water Heaters

Hot water is the "priceless ingredient" that is so necessary to maintain personal cleanliness, health, domestic sanitation and everyday home comfort and convenience.

Most of us have become so accustomed to the convenience of gas-heated water that we take its efficiency and economy for granted, and many times are likely to provide an inadequate space or installation for this 24-hour-per-day servant. The gas water heater, if properly sized, can and will provide a constant supply of fresh, hot water if you follow a few easy suggestions.

Suggestions For Proper Location

Gas automatic storage water

Floor Space Required For Gas Automatic Water Heaters

Size	*Minimum*	*Maximum*
30 Gallon	22 in. x 22 in.	30 in. x 30 in.
40 Gallon	24½ in. x 24½ in.	32 in. x 32 in
50 Gallon	28 in. x 28 in.	34 in. x 34 in
75 Gallon	31 in. x 31 in.	36 in. x 36 in.

Width x depth dimensions in above table show space required for enclosed water heater installation and include a 2-in. minimum space surrounding the heater.

heaters should be located so that they:

1. Are central to hot water outlets for economy and maximum service;

2. Are accessible for servicing and to permit good housekeeping;

3. Have sufficient air for combustion;

4. Are close to suitable vent.

When you take into consideration the fact that 85%, or more, of the water used within the home is HOT and that the water heater is a 24-hour-per-day servant, it is only logical that sufficient space should be provided to accommodate a water heater properly sized to meet the requirements of the individual home.

Therefore, whether the water heater is to be located in the basement, utility room, back porch, or kitchen, ample space should be provided to permit an accessible installation.

Remember that this automatic servant is mechanical, and while it does not require frequent attention, its placement should be such that it is easy to light and service.

Any A.G.A. approved gas automatic storage water heater having an insulated combustion chamber may be located within 2 in. of unprotected combustible material and within ½ in. of protected combustible material, but the provisions of your local ordinance should be observed. Check actual floor space required for heater selected.

Where automatic gas storage water heaters should *not* be:

1. Under stairs.

2. Small, closed-in areas unless fixed ventilation is provided.

3. Bathrooms and bedrooms.

Installation Suggestions

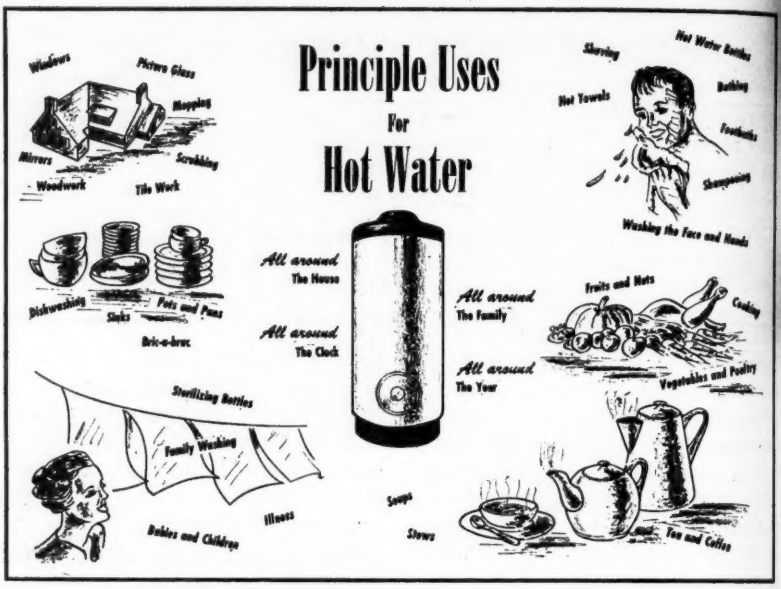
All water heaters should be installed to conform with the respective state, city, or county plumbing ordinance. Where no plumbing ordinance is in effect, the following minimum installation requirements are recommended:

1. Locate the water heater as close as possible to the vent. Horizontal runs of vent pipe should be held to a minimum.

2. Provide or allow sufficient space to afford accessibility for inspection and adjustment.

3. Do not install a gas water heater in a bathroom, a bedroom, or any occupied, normally closed room.

When a water heater is installed in



a normally closed room or compartment of less than 25 sq. ft. in floor area, a fresh-air intake must be provided at or near the floor, and at or near the ceiling. Each fresh-air intake shall be at least 36 sq. in. area.

4. Allow a minimum of 6 in. from top of draft diverter to vent inlet.

5. Water heaters should rest on the floor. Elevated installations projecting into attic are not good practice.

Vent

It is suggested that all water heaters should be vented in accordance with local practices and local ordinances.

Water Piping

It is suggested that the hot water piping be the smallest pipe diameter consistent with adequate delivery of hot water. Too small a size will restrict flow; too large a size will waste heat unnecessarily.

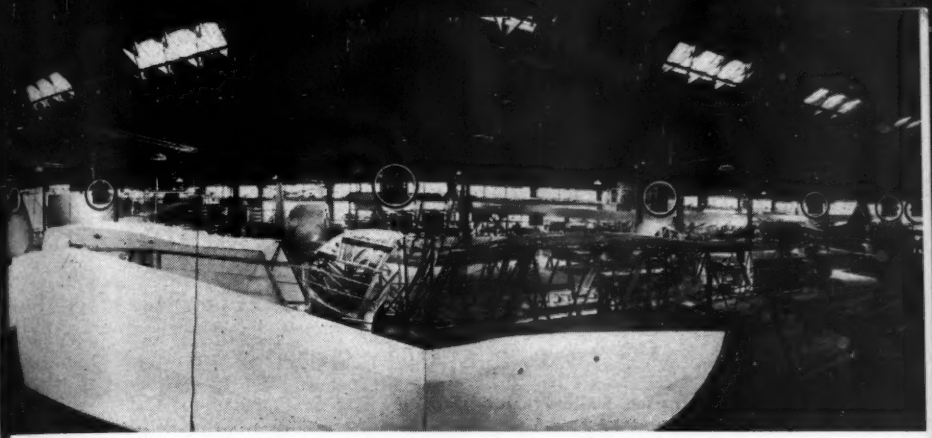
Where a water pressure regulator or check valve is used, a pressure-temperature relief valve must be included in the water piping installation. It is also recommended that a water shut-off valve be installed in the cold water line at or near the water heater.

Gas Piping

A gas shut-off cock should be installed ahead of the water heater controls and ahead of the union.

Cabinet Installations

If a water heater is located in a cabinet, free circulation of air must be provided by two openings (36 sq. in. minimum area, each) one in or near floor, and one in or near ceiling. Cover openings with grille or louvres.



The 2,000,000 cu. ft. of space in the Laister-Kaufmann Aircraft plant at St. Louis is heated by 45 Reznor unit heaters. Nine of these can be seen in this photo. The company made gliders for the army in this workshop.

Constant Temperature Provided Glider Plant by Gas Heaters

LAISTER-KAUFFMANN Aircraft Co., St. Louis, had the production job in the war of building gliders for carrying airborne divisions into battle, according to the "Reznor News."

The job required space—lots of it so the company acquired the St. Louis arena. The buildings were not designed for housing the production line.

How to heat the two million cubic feet of space proved to be a prime consideration. Heat had to be provided for the employes and at the same time, the temperature had to be uniform for production specifications.

The general contractor was the American Gas System, Inc., and the heating contractor was Braun Plumbing & Heating Co., both of St. Louis. The final specifications called for Reznor unit heaters throughout to provide flexibility of application and dependable operation at all times.

More than 45 Reznor unit heaters were installed. Through the cooperation of Reznor's representative in St. Louis, George E. Wrasmann Co., the system was planned as follows:

Duct distribution with Reznor heaters used for heating the office, engineering and drafting departments to maintain a temperature of 70°.

US type Reznor heaters located to give even heat distribution. This proved to be the answer in the factory and the important wood-working rooms. The Reznor heaters were used in conjunction with mist type humidifiers to maintain a constant temperature day and night and to sustain a 50% to 60% relative humidity.

Although the buildings are in the St. Louis City boundaries, it was impossible, due to war regulations, to obtain a dependable, adequate gas supply from gas mains.

As a result, American Gas System, Inc., installed a propane-butane supply at 1200 Btu. and this supplied ample heat for all purposes.

PUMP PROBLEMS

Balancing Pump and Manifold Capacities in the Small Bottling Plant

By R. STANLEY SMITH

Manager, Smith Precision Products Co., South Pasadena, Calif.

THE construction of the smaller type of bottling plant, principally for the filling of 100 lb. cylinders, has recently received much more attention from butane and propane dealers handling local distribution.

It is important in this service that the initial equipment cost be kept within reasonable limits. It is also just as important that the equipment be such that the operator may accomplish the everyday filling job with a minimum expenditure of time and effort.

In this service the rotary pump has come into quite extensive use. A direct-connected, electric-driven unit is compact and convenient to install, and under good installation conditions, will deliver economical and dependable service. It is the purpose of this article to briefly outline the possibilities, as well as the limitations, of such a bottling plant installation. Additional important detail information pertaining to general butane and propane pump problems has been covered in previous articles in this series, and these should be consulted.

In choosing a pump for bottling plant service, it is considered good practice to select one with a capacity rating not greater than three to four times what will be the actual manifold delivery. This proportion, it has been found, allows a good margin for usual pump "slippage" and at the same time assures an adequate flow through the pump to carry off any accumulation of heat or vapor.

Minimum Filling Time Explained

Next in importance in making initial calculations, is to allow for a minimum actual filling time of not less than five minutes for each 100 lb. cylinder. Since a 100 lb. cylinder holds just under 25 gallons of fluid, this means that the flow rate into a single cylinder should not exceed five gallons per minute. One reason for this limitation on filling speed is the extremely small flow area of the valve passages through which a cylinder must be filled. The restricted passageway in these valves is such that it is necessary for the liquid to flow at a rate of almost 40 feet per second, assuming that this rate is maintained through the entire suggested five-minute period.

However, there is another still

more important reason for allowing plenty of filling time, which is that as the liquid propane enters the cylinder, an equal volume of propane gas already in the cylinder must be compressed and condensed. This condensation of the propane gas within the cylinder, releases some 600 Btu (British thermal units) of heat energy which in turn must be absorbed by the entering fluid or dissipated by the cylinder walls.

Raises Fluid Temperature 10°

This is enough heat to raise the temperature of the entire 100 lbs. of incoming fluid as much as 10° F. If this heat were evenly distributed throughout the fluid, this increased temperature alone would raise the pressure within the cylinder by not less than 20 lbs., and add just this much to the total differential pressure which must be pumped against.

Even when the cylinder is filled as slowly as here suggested, this released heat energy often does not have time to dissipate or even to become evenly distributed, with the result that a still greater momentary pressure is often created.

We have covered this subject in considerable detail because when these items are well understood, a much better appreciation of the filling problem is had, with the very obvious conclusion that slow filling is important.

Now, the simplest way to allow more time per cylinder, and yet not reduce the total volume output, is to have a number of cylinders filling at the same time. This is easily arranged for by providing the pump outlet with a cylinder manifold to connect up as many cylinders as requirements may dictate.

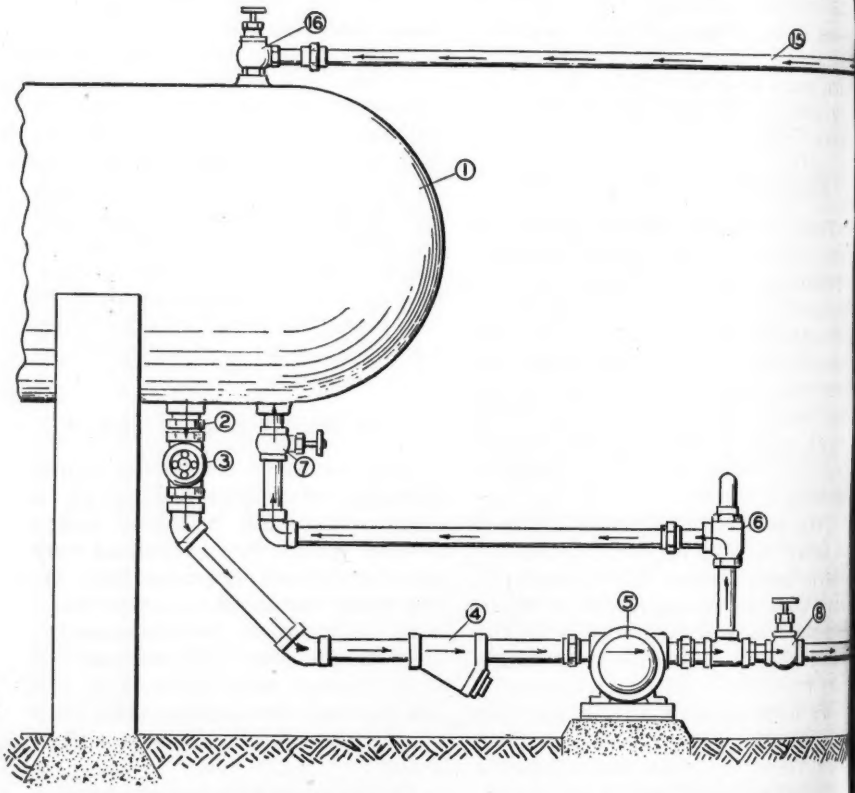
In practice, it is found that about 40 100 lb. cylinders per hour is as fast as the average operator can handle, off and on the scales, and operate his valves. Some may consider this too fast, but assuming this rate, and that a five outlet manifold is provided, we may assume that four of the five cylinders will be filling at all times, while the fifth is being changed. At the rate of only four gallons per minute into each container, our manifold discharge will be 16 gallons per minute, and based on the suggestion of a pump rating of three to four times the actual manifold flow, we could choose a pump up to 50 GPM capacity.

Sixth Scale, Greater Production

This might be considered a well balanced installation, although a sixth scale could be added and a greater production be realized with some additional operator help. On the other hand, with a lower pressure adjustment, and increasing the filling time to eight minutes per unit, an easy production of 30 cylinders could be realized with very comfortable pump pressure differentials.

In the accompanying drawing, a pump and manifold assembly is illustrated. Here, a 50 GPM, direct-connected, electric-driven pump supplies propane to a five-scale manifold. In normal use, four of the five bottles are always filling, while one is being replaced. A continuous average manifold discharge of 16-2/3 GPM will make it pos-

Typical, Well-Balanced, Small Bottling Plant Layout for 100-lb. Cylinders

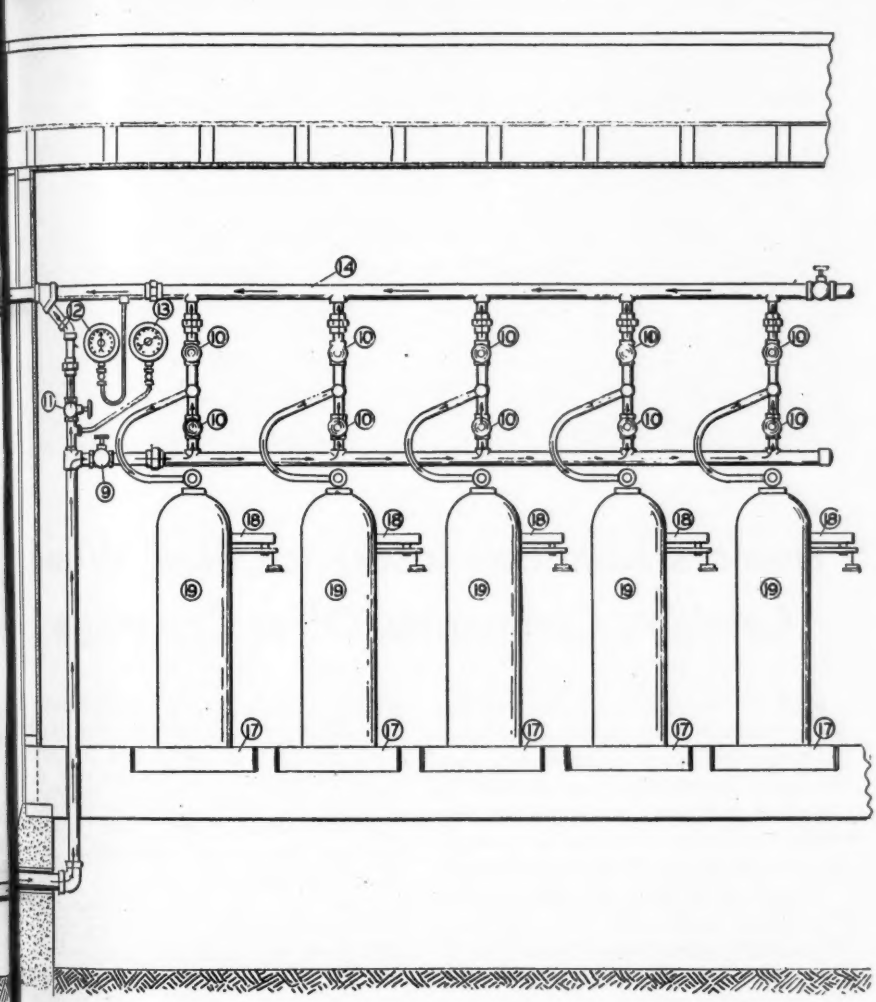


In this bottling plant layout, a double manifold is provided. The lower manifold distributes high pressure fluid, as usual, to the several cylinders on the scale platforms. The upper manifold is connected through the vapor return line back to the storage tank.

This arrangement has several useful features. For example, should a bottle be found overweight after closing the lower valve, the upper valve may be opened to permit ready discharge of any overage. The higher pressure due to vapor compression in a newly filled bottle makes this possible.

Another use is when a cylinder comes up slowly, due to unusual heating or possibly due to the inclusion of ethane or other non-condensable gas. By closing the lower valve and opening the upper valve, a rapid reduction of temperature and pressure takes place, after which filling may be resumed.

Valve 11, conveniently placed within easy reach of operator, provides for fast manual pressure adjustment or reduction in such emergencies as several containers "topping off"



1. Propane supply tank.
2. 3" Excess flow valve.
3. 3" Globe valve—300 p.s.i.
4. 2½" or 3" strainer—60 mesh screen.
5. 50 GPM propane pump.
6. 1½" Spring loaded by-pass valve.
7. 1½" Globe valve—300 p.s.i.
8. 1½" Globe valve—300 p.s.i.
9. 1¼" Globe valve—300 p.s.i.
10. ½" Quick opening manifold valve.
11. 1" Semi-needle hand by-pass.
12. Low pressure gauge—300 lb. scale.
13. High pressure gage—300 lb. scale.
14. 1¼" Vapor return manifold.
15. 1½" Vapor return line.
16. 1½" Globe valve—300 p.s.i.
17. Scale platform.
18. Scale beam.
19. 100 lb. cylinder.

sible to roll off one filled cylinder every 1½ minutes.

Automatic electric valve operation may be provided, or, when an operator has become accustomed to the work, hand closing of the valves is an entirely practical operation. A second manifold connected to the vapor return line is shown. This arrangement makes it possible to discharge any overage which may have entered a cylinder, as in the case of hand operation. Over-filling must, of course, be strictly avoided in compliance with safety regulations, and a double manifold, as shown, greatly simplifies any necessary weight correction.

An installation as indicated is easy to operate, and has many advantages over some more costly plants now in use. This system will insure an excellent output without resorting to excessive differential pressures, and this is a very desirable feature with any type of pump installation.

Dealers Abandon Insurance Plan When Casualty Companies Offer Coverage

AS a result of recent actions taken by the Texas Insurance Commission, the Texas Butane Dealers Association has decided to suspend its plans to form its own casualty company to give Texas dealers protection in their operations.

This fact is fully set forth in the following statement received by Butane-Propane News from Wm. J. Lawson, executive secretary of the Texas dealer group:

"On Sept. 4 the Texas Insurance Commission released a new schedule of rates covering bodily injury and property damage insurance for butane equipment. These new rates pertain mostly to re-insurance and excess insurance. There was no change in the basic rates for the prime amounts of $5,000-$10,000-$5,000, except that under the laws of Texas all vehicles which come under the jurisdiction of the Railroad Commission for insurance purposes automatically fall within a classification known as the "Truckmen Group." This classification carries a little higher rate than the one the trucks were operating under as private carriers.

"One of the principal insurance problems has been caused by the inability of the insurance companies to find a market for their excess coverage and re-insurance. The rates as authorized in the past by the Texas Insurance Commission have been too low to attract a market, according to the testimony which was offered by insurance company representatives before the Board of Insurance Commissioners at a hearing held in Austin the past summer.

"When the Insurance Commission granted its new rates they set up new schedules which in effect allowed in-

Texas butane dealers listen to a discussion of the types and amounts of insurance that licensees must carry and the new rules and regulations for the B-P Gas industry at the September open hearing before the Gas Utilities Division of the Railroad Commission of Texas, in Austin.

surance companies to charge about double the previous rates for bodily injury and approximately three times the previous rate for property damage, for amounts in excess of standard limits of $5,000-$10,000-$5,000.

"When testimony was taken by the Board of Insurance Commissioners on July 10 several insurance company representatives testified that their companies would be willing to write butane insurance if they could get the rates which the Commission recently granted.

"In view of this testimony and the action of the Commission in granting the rates requested by the underwriters, our Association and the Executive Committee of our proposed insurance company feel that there will be a sufficient number of larger insurance companies who will now be willing to write butane coverage to enable all butane licensees in Texas to get the minimum legal amounts of insurance required.

"For that reason we have suspended all activities in the organization of our proposed 'Butane Lloyd's Insurance Co.' We have no desire to get into the insurance business unless it is absolutely necessary, but we are taking the precaution of keeping intact all the work we have previously done on the organization of our proposed insurance company."

Revised rules and regulations have recently been issued by the Texas Railroad Commission, which will now govern the industry in that state, by virtue of Senate Bill No. 269, which is the butane safety law covering transportation, storage and utilization of liquefied petroleum gas in Texas.

Each licensee must carry insurance coverage as set out by the statute, regardless of which phase of the industry he is engaged. The type of insurance depends upon the types of operations he is conducting, states Gus Strauss, Director of the Commission.

Industrial Gas Loads Are Velvet For Butane-Propane Dealers

DO you remember the day when the building of a small bridge over a stream meant the closing of a road for several days and brought the inconvenience of impassable detours?

Thanks to American ingenuity, those days are gone forever, for corrugated metal culverts have proved to be the answer to the problem. Today, one-half of the road is left intact while the other half is trenched out and a length of metal culvert is rolled in. After this section has been covered and the road above it re-surfaced, the other half of the road is dug up and a second section of culvert placed against and fastened to the first one. This is quickly covered, and normal traffic is resumed.

The job which once required days and disrupted traffic is now but a matter of hours, and it interferes but little with travel over the highway while work is in progress.

By C. C. TURNER

Special Representative

Butane-Propane News

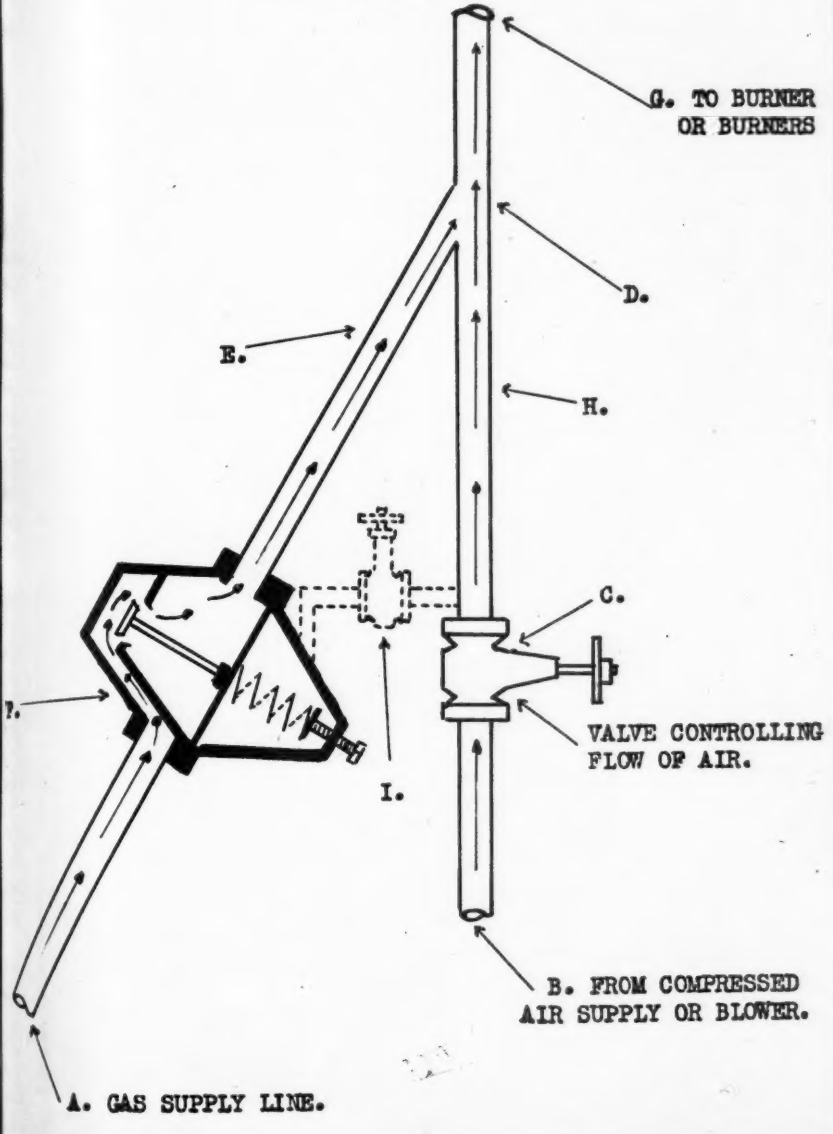
Labor and material costs are but a fraction of what they once were when wood, steel, or concrete bridges were constructed.

I have said, small streams, but at that, the stream need not be so small. Stock culvert sections are available in diameters up to five feet, and larger ones are frequently fabricated on special order. Often several small culverts are placed side by side in order to avoid the necessity of making a deep excavation or a heavy fill.

This practice is illustrated by one of the accompanying pictures. Note the shallowness of the fill on top of these culverts, and the absence of expensive masonry or concrete abutments. No wonder that road builders are turning to the use of metal culverts in increasing numbers. In spite of wartime restrictions, the metal culvert business held its own during war years, and has already started its pre-war habit of doubling its volume each year.

New uses are being found for culvert sections, such as replacing wooden forms in the making of concrete piers for buildings, and serviceable barrels are made of them by inserting heads in the ends. Emergency drums were made

SCHEMATIC DRAWING OF A PROPORTIONAL MIXER ASSEMBLY.



Three furnaces installed at the Bancroft-Martin plant. Note the individual blowers; also, the unique lighting torch between the second and third furnaces.

of culvert sections during the war by welding the seams and welding heads into both ends.

Perhaps you, like I, have theorized on how these culverts are fabricated, and have pictured them as being first made up of perfectly smooth sheets after which the corrugations were rolled into them. American ingenuity has triumphed again, and as is often the case, it has been in a way quite the opposite from what would seem logical.

Flat sheets are first corrugated between powerful dies in presses, then they are curved to the proper radius by being passed through a "break" which also has dies to conform to the corrugations in the sheets. Next a section of culvert is formed by riveting the necessary number of curved sheets together. The seam where the two ends come together is not riveted at this time, this being in order to permit the telescoping of one section to the depth of one corrugation inside of the next section. After this has been done the longitudinal seam is riveted. By assembling a number of culvert sections in this manner a culvert of any desired length may be fabricated.

Why Sections Are Riveted

Why are culvert sections riveted together instead of welded? It is because they are formed of heavily galvanized sheets, and welding would spoil the galvanizing for several inches on each side of the weld. It would also change the chemical composition and physical characteristics of the steel at the joints.

Steel culverts are made of tough steel, and they must be of uniform strength throughout in order to withstand the tremendous compressive strains to which they are subjected without yielding or buckling at any point. It would not be practical to attempt regalvanizing after fabricating because of many production problems; therefore, riveting remains the accepted method.

Where B-P Gases Are Used

One might ask where B-P Gases are used in the construction of metal culverts if they are cold formed and riveted. Unless the culverts are coated with melted asphalt the application of these gases may not be direct in the fabricating process, but there are shearing machines used for cutting sheets and plates, and these require cutting knives. There are corrugating machines, and these require dies. There are punching machines, and these require punches and dies. There are riveting machines which require riveting heads and anvils, and gas is used in these operations.

Metal culverts are made of *tough* sheets and plates, varying in thickness from 16 to 10 gage. Rivets used vary from ¼-in. in diameter to ½-in., and they are headed cold. It takes the very best in cutting blades, dies, and punches to stand the punishment. Sometimes they will break, and quite often they wear to the point that they are no longer serviceable.

Culvert manufacturers do not depend on production tools to any great extent, and therefore manufacture much of their own equipment. This is particularly true of

Three furnaces installed at the Bancroft-Martin plant. Note the individual blowers; also, the unique lighting torch between the second and third furnaces.

those parts of machines which carry the brunt of the load. Only the finest tool steels are used, and they must be tempered to perfection. I know of no piece of steel which has to take greater abuse than a slender punch such as is shown in the picture of a punching and riveting machine that is used in the plant of the Bancroft & Martin Rolling Mill Co., of Portland, Maine.

Strain on Tools is Severe

Not only is the strain upon these punches a compressive and shearing one; it can also be one of twisting or of bending. A broken punch can hold up production for several minutes and pile up overhead expense. Cutting, punching, and riveting tools must be the very best and properly tempered in order to avoid this!

At the Bancroft & Martin plant three Johnson No. 130 furnaces are used for the exclusive purpose of heat treating and tempering dies, punches and shearing blades which are used in their business of manufacturing steel culverts and reinforcing irons.

The furnace shown at the extreme left in the picture is equipped with four burners and it is used for preheating high speed steel or for soaking at preheat temperatures of from 1300° to 1400° Fahrenheit.

The middle furnace is equipped with 6 burners and operates usually at 2250° F., although its range is from 1800° to 2300°.

The furnace at the right is equipped with two burners and has a range of from 600° to 1200° F. It is used for drawing and annealing purposes.

Air to all three furnaces is furnished by individual electric blowers, and the amount of gas flowing to the burners is determined by the flow of air, this being regulated by a gate valve in the air pipe line, the blowers running at a constant speed.

Mr. Clark, shop superintendent, tells me that he packs all punches and dies when heat treating them in order to avoid pitting, for it is essential that the surfaces be almost glass smooth in order to avoid catching on the metal as it is shaped or punched.

Pitting and Scaling Compared

Mark that I have referred to pitting instead of scaling. The two are entirely different. Scaling is the formation of a hard surface skin which is usually not too firmly bonded to the good metal beneath it, and it is due to the uniting of a highly heated metal surface with impurities in a fuel, or the carbon in the fuel, itself, if carbon is present in excess quantities above that which is required for perfect combustion.

You can get scaling with any fuel if combustion is imperfect, but it is an undesirable condition and entirely uncalled for in the use of B-P Gases. Pitting is an entirely different matter. It is usually caused by the uniting of highly heated particles of a metal surface with excess oxygen.

Pitting can and does occur quite as frequently in electric furnaces as in any other type of furnace, our quixotic electric competitors to

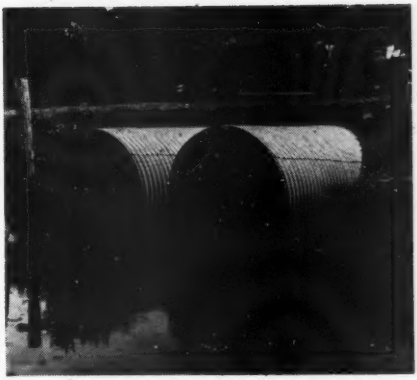
the contrary, notwithstanding. Packing in either an inert substance or one of the proper composition to impart desired qualities to steel excludes oxygen and prevents the occurrence of pitting. Articles so treated can be sharpened prior to heat treating, and require little if any dressing or touching up afterward.

Mixing Valve is Explained

I have mentioned the three individual blowers which supply air to these furnaces, so perhaps an excursion into the underlying principles of proportional mixing might be in order. A proportional mixing valve is nothing more or less than a very sensitive pressure regulator which is usually set so that the pressure on its outlet side is at or near atmospheric pressure.

In the schematic drawing, gas is supplied from the gas system to point "A" at a pressure which is usually below 11 in. of water column. Air is supplied at point "B" at a slightly higher pressure, and its flow to the burner is regulated by valve "C". In rushing by point "D" the air creates a partial vacuum in pipe "E" on the principle of inspiration, thereby causing the valve in the proportional mixer "F" to open and allow a quantity of gas to flow into pipe "E" and to be entrained by the air stream at point "D". The mixture passes on through pipe "G" to the burner or burners.

The flow of gas is always proportional to the velocity of the air passing point "D"; hence, the term "proportional mixer." When the differential in pressure between

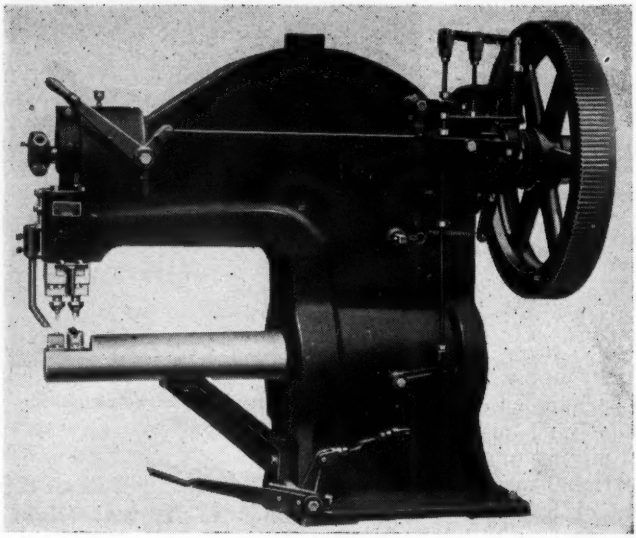


Two culverts of Bancroft-Martin's installed side by side.

pipes "E" and "H" is very slight and greater sensitivity of the proportional mixing valve is required, an auxiliary loading pipe line, as illustrated by dotted lines at "I", is sometimes run from pipe "H" to the spring side of the diaphragm in the valve. A valve is inserted in this line as shown, which, after once being properly adjusted, is rarely if ever disturbed.

Expert Knowledge Not Needed

I would not have you think that this is all that there is to know about proportional mixers, for of course there are nozzles, mixing chambers, and special burner heads, all of which depend in design and operation upon the purpose for which they are intended by the manufacturer, but there is nothing about proportional mixers which should scare the average service man or that requires a Bachelor of Science degree to understand them. Later in this series there will be



Punching and riveting machine used in the Bancroft-Martin plant. The punch at the extreme left punches the holes through two sections of culvert. The punch and anvil next to it head the ½-in. rivets cold.

special chapters devoted to their more technical aspects.

A rather unique device is used for igniting the burners in the furnaces installed at the Bancroft-Martin plant. A petcock with a restricting orifice in it is cut into the gas supply line, and from it there leads a length of flexible rubber tubing in which a piece of 5/16-in. cupper tubing about 2 ft. long is inserted at the other end. This assembly serves as a torch which is ignited, and used to ignite the burners beneath the furnaces.

Orifice Performs Double Role

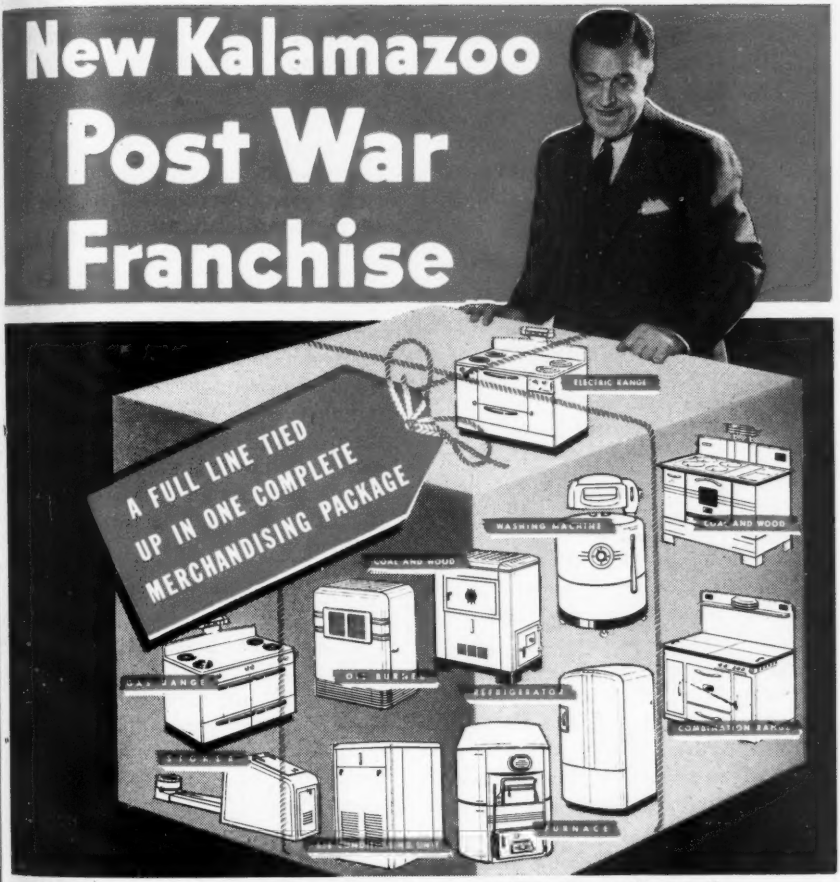
The restricting orifice in the petcock serves the dual purpose of assuring a lighting flame of the proper length when the petcock is fully open, and also guards against the escape of a large quantity of gas if the hose should be accidentally damaged or pulled off from the petcock.

It will be noted that all three furnaces are provided with Wheelco thermometers which operate on the thermocouple principle and are quickly readable because they are large and of the dial and arrow type. Mr. Clark states that they are very dependable, but that an automatic control such as that described in Chapter 15 and in use at the Hyde Windlass Co., would be desirable.

•

What are the load and profit potentialities with culvert manufacturers? The gas installation consists of a battery of five Bastian-Blessing No. 2519 control manifold assembled to a Fisher No. 722 regulator. High pressure manifolds are constructed of ⅜-in. pipe welded to ⅜-in. drop tees with

New Kalamazoo Post War Franchise



Look Ahead—Get Ahead—Keep Ahead with Kalamazoo

Kalamazoo — for the first time — offers franchise dealers in certain markets an opportunity to share in Kalamazoo prosperity. For 45 years. Kalamazoo has sold only by mail and through its factory-owned stores. Now, through mass distribution and mass production in highly modernized factories, the new Kalamazoo line offers outstanding values with great volume and profit possibilities. For complete information, write today to Sales Manager,

KALAMAZOO STOVE & FURNACE COMPANY
459 Rochester Avenue, Kalamazoo 6, Michigan

- A Great Name to Sell
- A Complete Line
- Exclusive Territory
- Business Counsel
- Outstanding Selling Features
- National and Local Advertising
- Sales Promotion Support
- Established Repair Business

KALAMAZOO
STOVES AND FURNACES
QUALITY LEADERS SINCE 1901

¼-in. pipe by POL pigtails brazed into the tees.

Total dealer investment in regulating equipment, pipe lines, cylinders, and labor approximate $200, and the consumption averages about 122 cylinders, or 12,200 lbs., of propane per year.

Big Returns on Investment

Assuming a net profit of 1½c per lb., the dealer's investment is paid off in a little over 13 months. If you prefer to figure it in another way, a yearly profit of $183.00 on an investment of $200.00 is a profit of 91½% per year on that investment. Doesn't this beat some of the old standard stocks invested in upon the stock market which return a conservative 6% if not disturbed by the acts of nature or the caprices of man?

There is another ace in the hole for the gas dealer at the Bancroft-Martin plant. Metal culverts are quite often coated with asphalt, and this requires dipping them in a tank of melted asphalt. A semi-cylindrical vat 22 ft. long and 6 ft. wide, containing about 1340 gals. of melted asphalt, is used for this purpose.

The present fuel is fuel oil at 8 cents per gallon, the burner being of the gun type with a complicated system of flues and auxiliary burners. The application is very inefficient and is giving plenty of trouble.

B-P Gas engineers are now figuring on converting this equipment to gas operation. It is estimated that the consumption will be approximately 72,500 lbs. of propane a year for this operation, alone!

•

I would not have you think that B-P operators are going to become rich by converting all of the culvert manufacturing plants in the United States, for there are not enough of them, but there are thousands of kindred industries in which steel sheets and plates are formed and punched, and all of them require new dies, cutters, and punches quite frequently. Most of them make these tool parts in their own tool shops. Introduction of new forms and shapes require the making of new dies and punches.

Good Market At Home

There are many thousands of punched items sold upon American markets or included in the construction of American appliances. Our own industry uses hundreds of thousands of such items in equipment hoods and appliance parts each year. Every manufacturer of punched or pressed metal products is a prospect for B-P Gas heat treating equipment in the tool shop, and there are thousands of such manufacturers in the United States.

There may be minor differences in application, but fundamentally their problems are the same, and no other fuel can approach B-P Gases, when properly applied, in flexibility, initial and operating costs, or results. Truly, here again is a luscious fruit to be picked if we awaken to our opportunity before it is too late!

Only

the O'KEEFE & MERRITT Gas Range has the Vanishing Shelf

Only

O'KEEFE & MERRITT has the Grillevator Broiler

KEEFE & MERRITTS ARE EASIER TO SELL

O'Keefe & Merritt gas ranges have earned a reputation for having more extra and exclusive features. One famous feature, the Vanishing Shelf, saves so many steps! Another outstanding feature, the Grillevator Broiler, makes broiling easier than frying. Wherever they are sold throughout the West, these fine gas ranges are preferred by women who pride themselves in their cooking accomplishments. For more than a Quarter Century women have been saying: "Buying an O'Keefe & Merritt is a wise choice!"

O'KEEFE & MERRITT

3700 E. Olympic Blvd. • Los Angeles 23, California

ONE OF AMERICA'S MOST MODERN GAS RANGES

Prosperous Kansas Farmers Will Pay Cash For B-P Gas Systems

ALTHOUGH greatly encouraged by a heavy backlog of orders for B-P Gas systems and appliances, Ralph Ward, owner of the Rural Gas & Electric Co., Salina, Kan., is still experiencing some of the hangover handicaps of the war, according to Mr. Ward, himself.

His display room was almost bare of B-P systems and appliances on Oct. 1, although a carload of such merchandise had been promised for Salina for early delivery. While the employment situation was easing, trucks and tires of the firm were growing old and parts and replacements are increasingly hard to secure.

This lag was recognized by Mr. Ward as only temporary and he is enthusiastic over future prospects. Pigeon-holed in his desk is a big stack of applications for home systems and appliances representing $20,000 of advanced orders, each one accompanied by a down payment. As soon as equipment becomes available in sizeable quantities he will be kept busy for months making the installations represented by these orders and others which are constantly coming into his office, Mr. Ward has stated.

Further encouragement is evidenced on every hand because the farmers in the rural areas for 100 miles in every direction around Salina appear to have plenty of cash, coupled with a desire to enjoy the benefits of modern heating and cooking systems in their homes. Most of those interviewed have expressed willingness to pay all cash for their equipment. In fact, only one prospective customer who has placed an advanced order has asked for installment terms, according to Mr. Ward. This means the prospect of plenty of going-concern capital which will enable the firm to handle its business very largely on a cash basis.

Mr. Ward started exclusively in the electric business at Great Bend, Kansas. About six years ago he bought the stock of the Farm Electrification Co., of Salina, and added B-P Gas lines, which include butane and propane tank systems, ranges, circulating space heaters, automatic pilot-control water heaters, floor furnaces, chicken brooders, pumps and other equipment.

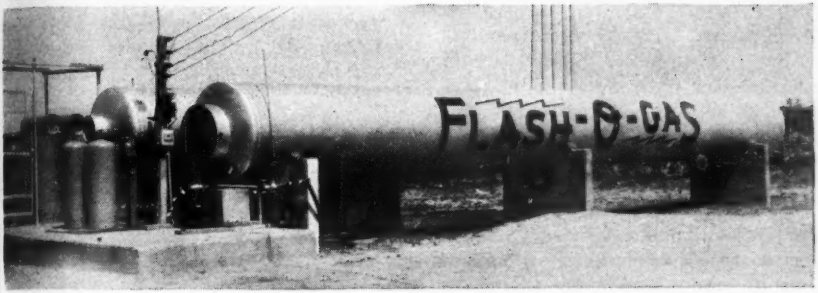
Carries Other Lines, Too

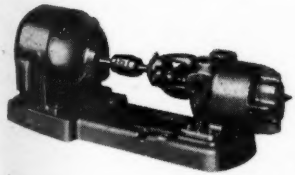
These, added to a line of Delco light products and plumbing supplies, place the firm in a position to bring complete modernized homes to its rural customers. The company confines itself principally to a distributing business to dealers throughout its territory. It does not store or deliver B-P Gas but leaves that service, and the refilling of bottles, to another firm which operates out of Salina.

The Rural Gas & Electric Co. handles installation services for its dealers and keeps two installation and repair trucks on the road. It expects to add more as soon as new trucks are available. The firm recently forestalled a temporary lag in installation service by purchasing a used truck. It has managed to keep its old trucks and tires in operation by frequent inspections and a constant program of repairs in advance of actual breakdowns, wherever possible. To accomplish these repairs it had depended on local garages.

"We found it easier to fill our o

PUMPING 65,160 GALLONS OF PROPANE





SIZES AND CAPACITIES

13 Sizes . . 3 Series . . Standard drives and mountings to fit every job. Capacities 1 to 300 g.p.m., pressures up to 1000 lbs. p.s.i.

FREE BOOKLET

"How To Solve Pumping Problems"
No. 11-57

Thirty pages of valuable, time-saving information.

ANOTHER EXAMPLE OF ROPER DEPENDABILITY

A five month record of operations by the Baker-Fleming Flash-O-Gas Company of Lubbock, Texas shows a total of 65,160 gallons of Propane pumped with Roper equipment . . . without repairs . . . without upkeep cost.

The liquid is pumped at the rate of 100 pounds (approximately 24 gallons) in about 3½ minutes regardless of inlet pressure. The liquid pressure varies from 70 to 200 pounds.

It's another example of Roper dependability indicating the advantages of using pumping equipment especially engineered to fit individual requirements.

GEO. D. ROPER CORP., ROCKFORD, ILL., U.S.A.

PUMPS ESPECIALLY ENGINEERED TO FIT YOUR REQUIREMENTS

ROPER
Rotary Pumps

BUILDERS OF PUMPS FOR MANUFACTURING, MARINE, PETROLEUM, AND PROCESS INDUSTRIES

ders for installations during the war than since, up to this time," Mr. Ward says. "This is due to the fact that our installations then were made for customers who could qualify under the priorities system and equipment usually was made available to fill these needs. Following end of the war, increased demands for systems and equipment, coupled with delayed reconversion programs, conspired to slow up our deliveries temporarily.

"At this time we have two salesmen on the road and expect to add more as soon as our merchandise begins to arrive in quantities," Mr. Ward continued. "We confidently expect a rapid growth in our business in spite of the possibility of increased competition in our territory. We expect to accomplish this by a continuation of our policies of selling only standard equipment and maintaining satisfactory service practices."

Propane Demand Leads

The Rural Gas & Electric Co. handles Dallas Tank Co. products, which include butane and propane tanks and Bastian-Blessing equipment and fittings. Demand in the territory, at present, is principally for propane systems which can be set aboveground, although there is a sizeable backlog of orders for butane tanks.

Home propane service usually is supplied from 430-gallon, ball-shaped tanks set on concrete bases, each having 200-lb. working pressure. "Rego" heads, regulators and gages, furnished by Bastian-Blessing, are used. Mr. Ward states that his dealers have found this size the most satisfactory to serve the average farm household load in his territory.

SAFETY IS STRESSED

In making installations of such systems the company places tanks a minimum of 25 feet from the residence or other building to be served. All pipe leading from the supply tank to appliances is run up from the ground along the outside of foundations, through the sills, to a position directly beneath appliances, instead of being run under the house. All pipe joints are properly sealed to prevent leaks, as an additional safety precaution. The firm also cooperates with state authorities in making inspections at proper periods.

The firm also sells 100-lb. and 20-lb. bottles of propane to its dealers and other customers. These are used principally in the territory for fueling small appliances or use in a trailer.

Colorado Dealers Will Hold Annual Meeting Nov. 27

H. H. Torbit, president of the Colorado Liquefied Petroleum Gas Association, has announced that the first annual meeting of the association will be held at the Cosmopolitan Hotel in Denver on Nov. 27.

All members are urged to be present and to encourage all in their localities who are interested in handling B-P Gas equipment to attend, also. The success of the meeting, Mr. Torbit states, cannot be assured by the efforts of the committeemen in preparing a good program, but will depend upon the active participation of B-P Gas men in its proceedings.

Directors have met and made up a tentative schedule for the meeting and the necessary committees for handling the activities on the day of the meeting have been appointed and are now functioning.

Arrangements have also been made for nationally known speakers and it is planned that members will be able to make contacts with various manufacturers at the meeting, several of whom plan to have displays.

With the expansion of B-P Gas in Colorado this is expected to be an important meeting.

Florida Dealers Organize

THE organization of the Florida Liquefied Petroleum Gas Association occurred in Jacksonville on Sept. 11 when officers were named for the ensuing year and by-laws and a constitution were adopted by attending dealers and distributors. Officers named are:

PRESIDENT

Willard Ware, Gas-Oil Products, Inc. of Florida, Coral Gables

VICE-PRESIDENT

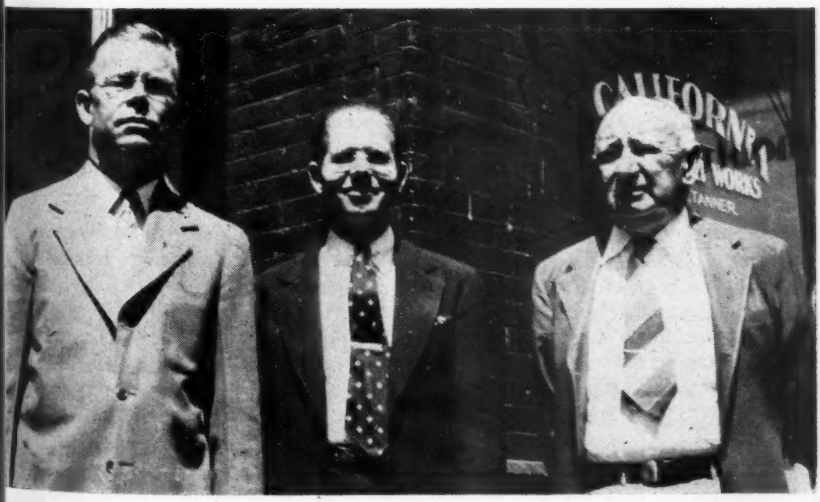
Chas H. Rogers, Jr., Ocala

SECRETARY-TREASURER

Harry C. Price, Green's Fuel of Fla., Inc., Sarasota

The directors are: F. D. Wills, Gas Engineering Co., Daytona Gas Engineering Co., Daytona Beach, Fla.; J. W. Owens, Central Florida Gas Corp., Winter Haven, Fla.; W. H. Duguid, Jacksonville Gas Corp., Jacksonville, Fla.; H. G. Lindsey, Polar Gas Co., Orlando, Fla.; J. E. Price, Southeastern Natural Gas Corp., Miami, Fla.; A. W. Spiller, Suburban Gas Co., St. Augustine, Fla., and W. S. Guitteau (manufacturers' representative), American Meter Co., Ft. Lauderdale, Fla.

The process of organization began sometime before the first meeting. A committee, composed of Kenneth H. Koach, chairman; H. G. Lindsey and L. R. Chandler, paved the way for the Association by drawing up the constitution and



Officers of the newly formed Florida Liquefied Petroleum Gas Association: Chas. H. Rogers, Jr., vice president; Willard Ware, president; and Harry C. Price, secretary-treasurer.

A Message to our Customers

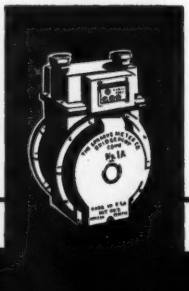
PRODUCTION! With VJ-Day culminating the War, the Sprague Meter Company, like all other suppliers of the Gas Industry, look forward to the day when restrictions will be a thing of the past and we can move forward to unprecedented production.

SERVICE! Sprague has been noted for its service, and in spite of tremendous demands placed upon the Company during the War, we continued to give the same high quality of service as promptly as could be effected under prevailing conditions.

NO SUBSTITUTES! During the War no substitute materials were used in any part of the meter This means that standard parts have been used throughout the War and will continue to be used in Spragues.

APPRECIATION! Your cooperation and patience has been greatly appreciated. We have done the best we possibly could, and it will be a pleasure to continue to serve you to the fullest extent of our ability.

F. C. Fairchild
President and General Manager



The **SPRAGUE METER COMPANY**
Bridgeport, Connecticut

by-laws for later approval by the members.

Three classes of membership are set out. "Class A" are active members and are designated as those owning and operating bulk storage plants of not less than 10,000 gallons capacity, or primary distributors holding or operating under national franchises, and who sell B-P Gas or B-P Gas equipment in Florida. Only "Class A" members may vote and each has one vote only.

"Class B" members are those interested in the industry but who do not qualify as "Class A" members. Dues for "Class A" and "Class B" members are $25 annually.

"Class C" is limited to honorary membership.

How Executive Committee Is Formed

Seven directors and three officers of the Association constitute the executive committee and no member company shall have more than one representative on the executive committee. One member of the executive committee shall be a manufacturer or supplier representative and one member shall be chosen from the "Class B" membership group.

During the meeting, Frank B. Boice, Shell Oil Co., Inc., New York City, and chairman of the Liquefied Petroleum Gas Association legislative committee, addressed the group upon the subject of state legislation for B-P Gas.

The enrollment at the meeting totaled 65. The first annual meeting of the Association will be held next April.

Survey Shows Most Families Want Medium Priced Range

In a recent housing survey by the Curtis Publishing Co., a host of helpful information was revealed regarding the gas range needs and plans of families living in urban centers of 35 states.

Forty-five per cent of the interviews were with males and 55 per cent with females, each giving his or her family's design for living. The interviewing was done by local representatives of a national researoh organization. Results:

POTENTIAL SALES

Families Interviewed:	Now Own Range 77.4	Will Replace Old Range 16-2/3	Will Buy New Range 21.5

Families Interviewed	Estimated Price Range
21.4	$100-$149
18.1	$150-$199
34.3	No decision
2.6	$300 and over
14.0	$200-$299

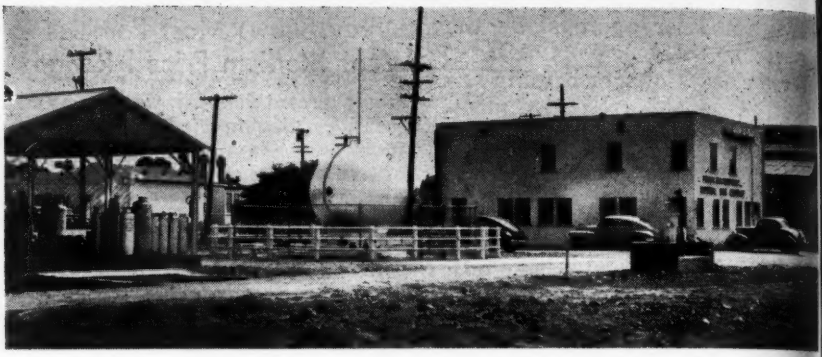
Sixty-one and seven-tenths per cent of potential sales will be for replacement purposes and 38.3% will be new customers. The median age of the ranges to be replaced is 12 years.

Standard of Calif. Plans Expansion Program

Plans for a construction program totaling more than $20,000,000 have been announced by H. D. Collier, president of Standard of California.

This program, suspended by the war, will include additions and improvements to refinery, storage, distributing, producing and office facilities of Standard and its domestic facilities.

The program will also cover the installation of new laboratories to keep Standard in the forefront of petroleum technological advances.



New filling plant, spherical storage and office building of Imperial Gas Co., Los Angeles.

Regulations Dictate Design Of Metropolitan Plant

THE Imperial Gas Co., of Los Angeles, propane distributor, recently decided to expand its facilities and acquired a tract of land in the southwestern part of Los Angeles. The plans called for modern and safe propane storage and bottling facilities. Particularly was it necessary to make safety foremost for their new project because it is situated in a residential section of the city which is being built up rapidly and soon the plant will be surrounded by fine residences.

A 5000-gallon sphere[1] was provided for propane storage by the Imperial Gas Co., and Parkhill-Wade, consulting and construction engineers, of Los Angeles, a pioneer in the development of B-P Gas storage and dispensing plants, was engaged to install the necessary supplemental equipment conforming in every respect to the regulations of the California Industrial Accident Commission and particularly to the exacting safety regulations set forth by the City of Los Angeles Fire Prevention Bureau, and the Building and Safety Department.

The equipment consists of the following items:

Storage Vessel. A steel sphere, constructed in accordance with the API-ASME Code for Unfired Pressure Vessels for a safe working pressure of 250 lbs. per sq. in., pro-

---

Manufacturers of products named:
1 Superior Tank & Construction Co., Los Angeles.
2,3,4 L. C. Roney, Inc., Los Angeles.
5 Smith Precision Products Co., South Pasadena, Calif.
Line valves, pipe and fittings by Republic Supply Co. of Calif., Los Angeles.

WEDGEWOOD....
MORE IN DEMAND

than Ever Before!

Reputation is hard to build and easy to tear down, but WEDGEWOOD today stands higher in public esteem than ever before, thanks to the unswerving policy of *Quality* established by the James Graham Mfg. Co. in 1882.

MODERNS PREFER GAS

Wedgewood Economy for LP Users...

● FOR BAKING, broiling or top-of-stove cooking, Western women naturally turn to the WEDGEWOOD. And for users of LP gas there's a world of economy in this *Quality* gas range.

WEDGEWOOD THE MODERN GAS RANGE

JAMES GRAHAM MANUFACTURING CO.

LOS ANGELES ★ SAN FRANCISCO ★ NEWARK, CALIFORNIA ★ PORTLAND, OREGON

vides storage for the liquid propane. The sphere is welded to a steel skirt and secured with anchor bolts to a substantial concrete foundation. The vessel is equipped with rotary liquid level gage,[2] pressure relief valve,[3] liquid inlet and outlet openings, vapor equalizing opening, outage percentage valve[4] and a liquid inlet opening for the pump by-pass discharge.

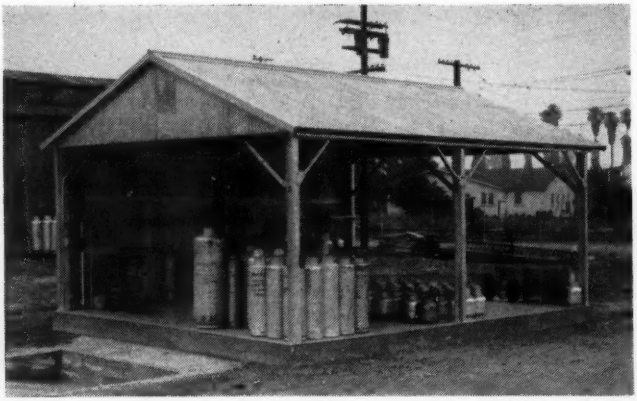
Pump. The pump[5] is of the positive displacement type specially built for pumping liquid propane, equipped with a flexible coupling and driven by a Class 1, Group D electric motor with selective control from two push button stations, one located near the storage vessel, the other located in the bottling plant building.

When the pump is operating and all valves on the discharge lines are closed in the course of operating the plant, the liquid discharge bypasses the pump through a suitable pressure actuated by-pass valve and is returned back to the storage vessel. Returning the by-pass liquid back to the storage vessel through a separate return line has proven the best plan because the liquid will remain cool.

If the by-pass valve permits flow of liquid into and immediately at the pump suction, only a small amount of liquid is continually being recycled and will heat up and vaporize or cause gas bubbles to form inside the pump casing and raise the pressure of the liquid. Frequently this causes vapor lock, pump freeze, and the pump driving motor will have to carry an extra heat load due to the increased energy required particularly at the time when the pump commences to freeze.

Suggestions have been extended recommending to build into a pump a suitable by-pass valve so as to make a self-contained unit. This, however, is impractical for the reason if the by-pass valve is built in the pump it would result in the circulation of a small volume of liquid which will become quickly heated and lead to vapor lock.

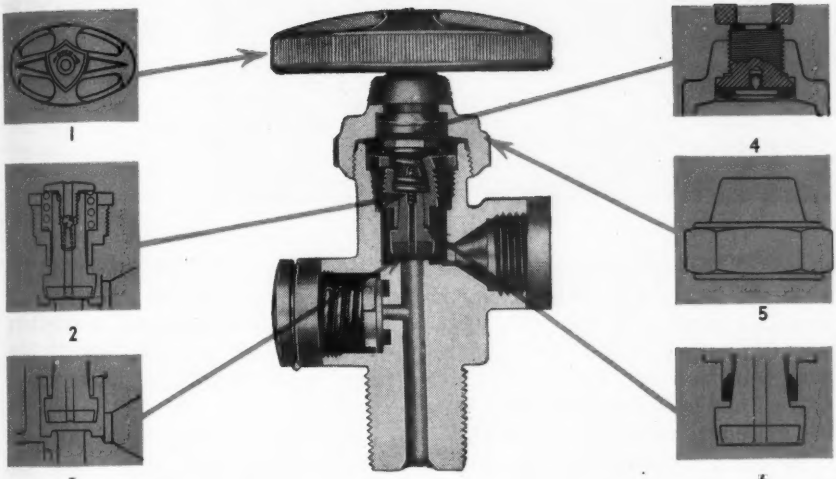
Cylinder Bottling Plant. The propane cylinder bottling plant is



Imperial's cylinder filling platform.

THE NEW SCHOENBERGER *Diaphragm Packless Cylinder Valve*

WITH PRESSURE EQUALIZER . . .



1 **OVAL HAND WHEEL** — provides a natural grip and easy operation.

2 **INTERNAL PRESSURE EQUALIZER** —prevents the lower stem from sticking or "checking shut" under any operating condition.

3 **LARGER SEAT OPENING**—with full clearance around stem head means 30 to 35% faster charging of cylinders than with conventional valves.

4 **BEARING PLATE**—placed between top stem and diaphragm. Reduces wear on diaphragms.

5 **VALVE CAP**—a large hex forging. Gives wide wrench surface. Eliminates need for special wrench.

6 **"TELESCOPE SEAL"**—provides a seal, permitting replacement of diaphragms on a fully charged cylinder.

7 **Back Seating Top Stem.**

8 **Quadruple Diaphragms of dissimilar metals.**

9 **Improved Safety Relief.**

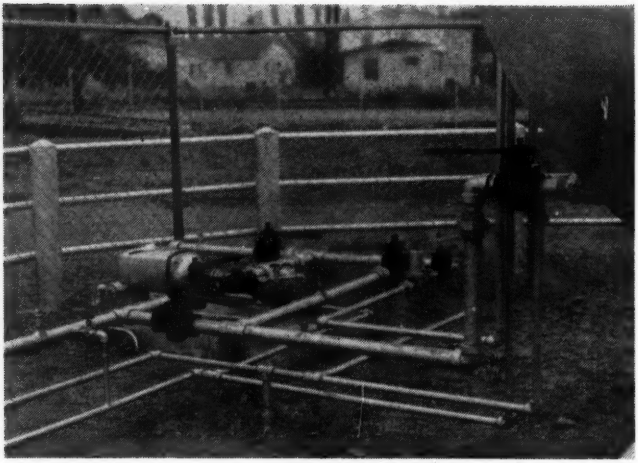
10 **Improved Seat Assembly.**

"Listed Under Reexamination Service of Underwriter's Laboratories, Inc."

Write for Bulletin P. B. 11

THE W. J. SCHOENBERGER CO.

8810 HARVARD AVENUE • CLEVELAND 5, OHIO



The excess flow valve on outlet piping unloads trucks and fills cylinders. It is a safer method than using the gas engine on truck.

provided with four weighing scales with the top of the scale platforms installed flush with the plant floor. A suitable distribution liquid manifold, equipped with control and trip valves, has been installed for filling the cylinders with liquid propane.

When the cylinders are filled with the proper amount of liquid by weight, and allowing the required vapor space or outage for thermal expansion of the liquid, the scale beam travel will trip and shut off the liquid flow to the cylinder. The operator is relieved of watching each scale beam and overfilling of cylinders is prevented through the use of this simple automatic safety feature.

The cylinder bottling plant is sheltered with a steel building properly grounded to protect against static electrical discharges. The building is open on three sides to provide maximum air circulation for quick dispersal of any concentrated gas vapors formed when the cylinder hose is disconnected. The one covered side of the building is for the operator's protection against wind or rain, but is provided with ventilating louvers near the floor.

Electrical Installation. All electrical installations for power and lighting conform to the regulations set forth by the State of California, City of Los Angeles and the National Board of Fire Underwriters.

Pipe, Valves and Fittings. All piping is extra heavy seamless and fitted with forge steel fittings. All valves are of the strength necessary for their respective services. All relief valves, except small line relief valves installed between shut-off valves and gas blowdown valves are piped into a common blowdown stack and vented to the atmosphere more than 20 feet above the ground. This stack is located above the sphere.

The plug type valves used can be

Every joint needs

TiteSeal

The hundreds . . . . yes thousands . . . . of metal-to-metal and metal-to-gasket connections, through which butane-propane gases must flow on their long trip from well to burner, are completely leak-proof when you use TITE SEAL Gasket and Joint Sealing Compound to protect them. TITE SEAL positively stops leaks under the most trying and unusual conditions.

TITE SEAL performs extra services. It preserves gaskets and rubber connections and prevents rust and corrosion. It also allows fast and easy dis-assembly of protected parts, because TITE SEAL never hardens, never sets . . . . remains soft and plastic always.

For a perfect, long-lasting, leakproof seal, always specify TITE SEAL.

Write for full details.

RADIATOR SPECIALTY COMPANY
CHARLOTTE 1, NORTH CAROLINA

RADIATOR SPECIALTY COMPANY OF CANADA, LTD., TORONTO 2
GOLDEN STATE RUBBER MILLS, LOS ANGELES 1, CALIF.

closed instantly. Other valves require time which is precious in case of fire. Handles indicate open or shut position. Steel is required by city ordinance.

The storage vessel is filled from a fuel transport truck standing on a level concrete slab adjacent to the crash safety railing. Just inside this railing the liquid fill line and vapor equalizing line connections are conveniently installed.

Safety Crash Fencing. Heavy steel pipe crash posts imbedded deep in concrete were installed at the required distance from the sphere. Three heavy, continuous steel pipe railings were attached above ground to the crash posts. The purpose of the crash fence is to prevent any vehicle from running or backing into the storage area and damaging or breaking any pipe line or equipment.

Inside of the crash fence a steel cyclone fence was installed and provided with a self-closing, lock-type steel gate. This precaution is necessary to permit only authorized personnel to enter the storage vessel area, and to protect against wilful, unauthorized tampering with the equipment.

Warning Signs. When the accompanying pictures were made, the warning signs ordered for this project had not been received. The entire project will have sufficient regulation warning signs installed in a manner to make them visible to everyone from any direction.

The entire project has received approval with commendations as to its safety features from all regulatory bodies having jurisdiction.

Campaign Under Way For Central Heating

At the second annual meeting of the Indoor Climate Institute recently held in Detroit, T. A. Crawford, Timken-Detroit Axle Co., was elected president, succeeding Paul B. Zimmerman, who has held the office since inception of the Institute.

L. N. Hunter, of The National Radiator Co., was made 1st vice president; R. E. Moore, of Bell & Gossett Co., and E. N. McDonnell, of McDonnell and Miller, were re-elected secretary and treasurer respectively.

Home Building Will Boom

"America is on the threshold of the greatest home-building and modernization era in the history of the country," stated Mr. Crawford. "The Indoor Climate Institute for the past three years has been analyzing the many phases of the related industries which contribute to controlled indoor climate. As the first step in providing the public with unprejudiced information on the subject of heating and cooling the home, the Institute has launched a program based on the idea of automatically-fired central heating systems.

"It is a startling fact that 9 out of 10 homes in the United States are without automatic heating; in fact, nearly half of the homes, or 19 million, are using stoves.

"A very understandable consumer booklet dealing with central heating systems of all types burning gas, oil or coal will, for the first time, provide the public with information which will be most helpful to the new home builder and in the modernization of old homes."

QUIZ Stove Burner Adjustments

• *This department is a monthly feature to stimulate thought and to give operators basic industry facts. Clip out for your notebook or file in a standard, 3-ring, loose-leaf binder. Sources of information: The Bottled Gas Manual, Handbook Butane-Propane Gases.*

Questions	Answers
1 **When and what burner adjustments are necessary on a new range installation?**	After the installation has been tested, all appliance burners should be checked and adjusted.
2 **What is the first thing to check?**	Check to see if the appliances are built for B-P Gas or if they are natural or manufactured gas appliances moved in from some other gas system.
3 **How should the kitchen range top burners be adjusted?**	Light all burners and adjust each one by opening or closing the air shutter on the mixer until the flame burns with a greenish-blue inner cone and is surrounded and topped by a purplish haze. A sharp cone with no haze indicates too much air. A lazy flame with yellow tip indicates not enough air.
4 **What causes light yellow sparks to fly from the flame?**	This is caused by dust or dirt from the house piping on the burner and should clear itself up readily.
5 **If flame characteristics desired cannot be obtained by adjusting the air shutter, what can be done?**	If the stove was not built to burn B-P Gas the orifice size is too large. Remove the orifice and install an orifice drilled for B-P Gas. The use of adjustable orifices is usually unsatisfactory for B-P Gas.

6

After a proper flame adjustment has been made and the burners do not light in all the ports, what can be done?

First check and see that all ports are open and clean. If this does not correct the trouble, check the spacing of the ports in the burner. For B-P Gas they should not be farther than ⅜-in. apart. If they are correctly spaced, and good results are not being obtained, a new burner is recommended.

7

If a good flame cannot be obtained, due to lack of gas, what can be done?

The appliance may have been used on B-P Gas with a higher Btu content or operated at a slightly higher pressure on a previous installation. Remove the orifice and substitute a slightly larger one.

8

If the air shutter is bent and does not fit the mixer, what will be the result?

It will be difficult to get a good flame as too much air will leak past the shutter. Remove the shutter and put it in first class shape or replace it with a new one.

9

What further check is necessary for top burner adjustment?

Light all burners and cover them with utensils and observe the flame. The flame should not impinge on the bottom of the vessel and roll up the sides. If this is happening with wide open burners, slightly smaller orifices should be installed.

10

What happens if burners are located too low?

Due to the larger flame of natural and manufactured gas, many stoves built for that purpose will have the burners located so low that the fuel consumption will be high and the cooking speed low. Burners should be raised to the proper height, which may require raising the entire inlet manifold in order to keep the burners level.

SUBJECTS TO BE COVERED IN FORTHCOMING ISSUES:

● Testing for Leaks, Burner Adjustment ● Thermostats, Pilots and Pilot Controls ● Burner Design and Application ● Appliance Conversions.

Pride and Ambition Carry Woman Dealer To Success

SUCCESS STORIES always have a strong appeal to the imagination. And when women make good in a man's industry, it is worthy of special note. Sitting in the front row of a group of Missouri dealers who had their pictures taken at the organizational meeting of the Missouri Liquefied Petroleum Gas Association (see BUTANE-PROPANE *News*, September, 1945, Page 35) was Winnie Steck. Inquiry disclosed that she has been in this and kindred industries for 24 years. So we asked her to tell us about it—and she certainly does in the accompanying letter.—Editor.

"Gentlemen:

"I want to thank you for your interest in writing me and I am sorry I have to say I have not been in the B-P Gas business as long as reported.

"Maybe this is why the mistake was made: I have been in the petroleum industry (gasoline and oil) for 24 years, starting July 22, 1921, putting in 17 hours a day, 7 days a week. We were pumping all that time 12 to 14 thousand gallons of gas a month. I was doing all the grease work and tire repair, besides working the driveway. Believe me, there was no sitting down.

Does Work of Three Men

"In October, 1939, my husband got sick and had to go to the hospital at Hot Springs, Ark., and has never been able to come back to the station. He is still there. So I had a filling station with enough work for three men and only me to do it.

"Along came a young man who had borrowed money from me to go in the B-P Gas (propane) business and as he had gone just as far as he could without more help he started working for me. Still that wasn't enough. I suggested that he take me in as a partner, which he did, but it wasn't long until it was a question, he buy me or I buy him. It happened to be me, for he had nothing.

"There I was with a business I didn't know, you might say, anything about, although I had been doing all of the filling and spraying of the cylinders, getting up some-

Mrs. Steck stands between her right-hand man, Lester Lott, and Chas. Lessing, who handles the cylinder end of the business.

times as early as 4:30 a.m. to get them done before I started the day's work.

"My big worry was how I was going to get those cylinders to 300 customers and put in all of the installations I had on file. I was going around in circles with no help for the filling station, no help for 'Thermogas,' and many a night I cried (just like a woman) but I finally got hold of myself, knowing that God was with me, but I had forgotten it with so much trouble piled on me at one time.

"Right there and then I started to look at things differently. It was only a few days later that one of my gasoline customers, Mr. Murry, who used to work for 'Skelgas,' came to my rescue. He had a brother-in-law out of work and he said he would show him how to make the installations and change-overs in the evenings.

"I interviewed Lester Lott. That was five years ago, and he took an interest in his work and learned very quickly. He has proven very satisfactory in every way and surely took a heavy load from my shoulders, never complaining about the long hours he sometimes has had to work. So with him and my good friend, W. A. Schuette, of 'Housgas,' Washington, Mo., I got by.

"In 1942 the freeze came and we were all in the same boat. We had to get by on what we had. Thank God the war is over.

"Today, Oct. 10, 1945, I got 200 cylinders, the first since 1942. I have a 1200 gallon International tank truck from which we do our filling. We also do lots of transit filling of small cylinders for trailers. We are the only ones in St. Louis County who do our own filling direct.

"We take pride in keeping our trucks clean and waxed and every

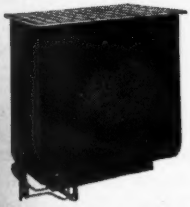
Mrs. Winnie Steck beside one of her delivery trucks.

Sit right down and write yourself a memo • • •

YES, SIR, *now* is the time to look into the TEMCO set-up—what's behind it—what's ahead of it . . . if you want to make money in the heating business.

The Tennessee Enamel Manufacturing Company is all set to go with a *new* product—The TEMCO Gas FLOOR FURNACE—developed before the war, then re-engineered and improved during the past three years when we couldn't make 'em.

The product is *ready* . . . for a waiting market . . . and so is a rip-snortin' sales campaign. This is a package of selling tools—using every form of advertising and sales promotion—ready to go to town for TEMCO dealers.



Quick Facts about the new TEMCO Gas FLOOR FURNACE

Re-engineered, to include new features developed in wartime experimentation.

One of the FIRST to gain A.G.A. APPROVAL under new and stricter specifications.

Burns all Fuel Gases—natural, manufactured and L-P (Liquid Petroleum) with equal efficiency.

Fully Automatic—Minneapolis-Honeywell thermostatic controls, optional.

100% Safe—fully guarded by safety devices built in and included in selling price.

Has the new "WHISPER-QUIET BURNER"—Your assurance of silent flame performance.

Easy to Install.

OBEY THAT IMPULSE!

If this is interesting to *you*—don't waste a day in getting complete information! Write us for the name of the nearest TEMCO distributor, and he'll give you the whole picture . . . of the huge home heating market . . . and of your opportunity to cut yourself a thick slice of profits.

TEMCO also manufactures a complete line of SPACE HEATERS, *designed especially for use with Liquefied Petroleum Gases.*

Tennessee Enamel Mfg. Co. • Nashville 9, Tenn.

TEMCO
FLOOR FURNACES
"The Biggest Little Thing in Home Heating"

cylinder is painted before it is delivered. We get a lot of compliments on our equipment.

"I am going to stick to retail business, using the two-cylinder, automatic regulator system, for the next year, anyway. By that time I hope things will be easier to get.

"Mr. Lott has done a good job helping to keep our customers satisfied—so satisfied that I can truthfully say we haven't a one but what has two or more prospects waiting to use our gas.

"Through all of my years of serving the public I have always used the Golden Rule, 'Do unto others as you would have them do unto you' —and it has always paid dividends.

"I have 2½ acres in Kirkwood, Mo., where I am going to build a modern plant in the near future.

"This is my story of how I got into the B-P Gas business.

"Winnie Steck,

"Thermogas Sales and Service,
"1101 North and South Road,
"Richmond Heights 17, Mo."

"UP IN THE AIR"

By Charles M. Corken

There is a danger spot in the rush of today's bulk plant tank buying which needs to be pointed to with emphasis.

Before the busy bulk plant operator gets an interruption, here is the warning:

Put Bulk Storage Tanks Up In the Air.

CHARLES CORKEN

The man-hour loss, power waste and equipment wear resulting from on-the-ground storage tank installations is a constant, unseen drain on profits.

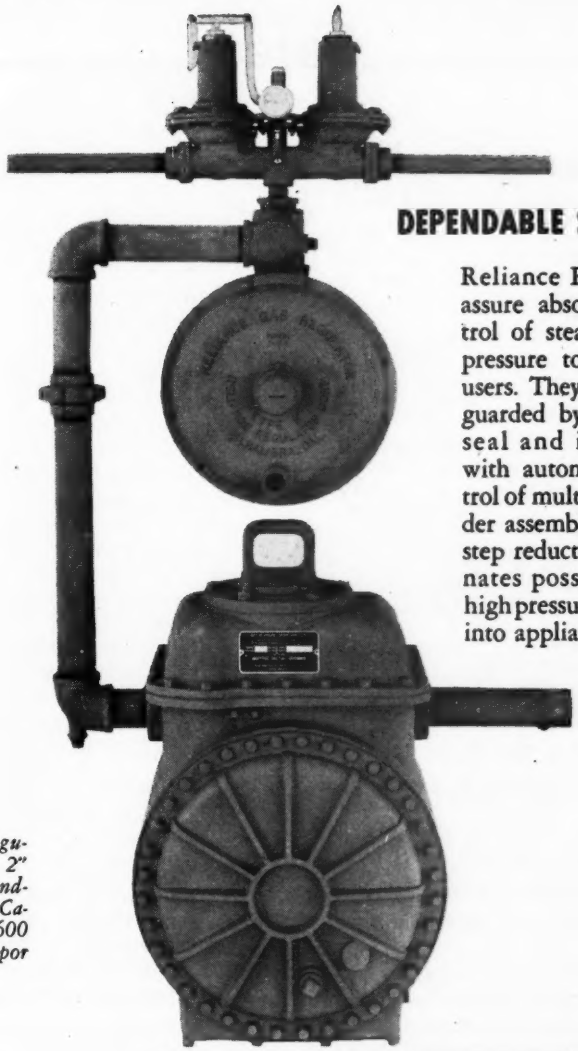
Read R. Stanley Smith's article, "Pump Starvation—Cause, Effect and Cure" in the July issue of Butane-Propane News, and keep in mind that the only way to get head pressure "for free" is utilizing the force of gravity, which means liquid level above the pump.

How much liquid level, depends. For instance, a tank from which liquid is to be drawn for a low capacity bottle filling pump, could be piped satisfactorily to keep the pump suction flooded if the tank was 4 feet off the ground. A tank connected to a transfer pump for filling delivery tanks would better be at least 6 feet off the ground. You won't get a tank too high, but it is easy to get one too low.

Of course, these heights are predicated on the pump location, pipe work, excess flow valve and fittings all being correct.

What of those tanks which have been near the ground for several years? Yes, I know about them, having traveled Illinois, Iowa, Missouri, Kansas, Oklahoma, Texas and New Mexico, examining bulk plants, and in every case it was possible to name the difficulties those operators were having.

The sad part was they had taken their experience for granted, as a problem necessary to being in the B-P Gas business, when the only difficulty was lack of altitude, or net, positive suction head.



Type MC Regulator with 2" Type H Secondary Regulator. Capacity up to 6600 cu. ft. of Vapor per hour.

DEPENDABLE SERVICE

Reliance Regulators assure absolute control of steady outlet pressure to L-P gas users. They are safeguarded by a safety seal and installed with automatic control of multiple cylinder assemblies. Two-step reduction eliminates possibility of high pressures getting into appliances.

AMERICAN METERS

RELIANCE REGULATORS

RELIANCE REGULATOR CORPORATION
1000 MERIDIAN AVENUE, ALHAMBRA, CALIFORNIA

Safety

General Employe Accident Prevention

● For the past seven months BUTANE-PROPANE News has been publishing the written outline upon which are based employe safety meetings of the Philgas Department of the Phillips Petroleum Co.

This program, if rigidly followed by dealers, would eliminate practically all accidents and give the liquefied petroleum gas industry an enviable record.

Employers and employes, alike, could do no better than to adopt the rules and suggestions of this safety course.

The series, of which the current chapter is the last, has been made available through F. F. Campbell, manager of the Philgas retail division.—Editor.

F. F. CAMPBELL

CHAPTER 8

I. Accidents can be prevented by:

A. Knowledge and Education.

1. Discovery of existing physical hazards.

2. Discovery and elimination or safe-guarding of motions, positions, or actions that are hazardous.

3. Determination of the qualifications required for the safe performance of the work, such as physical fitness, special abilities, etc., for determination of equipment and tools needed for safety, by the establishment of standards requisite for safety, including instruction and training of workmen involved.

B. Correct Mental Attitude on the Part of the Employes.

1. Willingness to use safety devices even though they may seem to slow up the operation.

2. Refusal to take short cuts at the expense of safety. Proper mental attitude means more than avoiding unsafe acts. It means also that the employe is ready to report to his manager any unsafe conditions he knows to exist. It means further his willingness to instruct or caution a fellow worker who might be performing an unsafe act or who might be using unsafe equipment. It means that the employe keeps asking himself constantly, "Am I doing this job the safe way?"

II. Every accident involves one or more of the following:

A. Material.

1. Methods of piling material and equipment.

a. Height of pile dependent upon character of material and consequent danger of tumbling, the means used in hauling and removal, the traffic nearby, and interference with other operations.

b. Strength of support. Evenness of support and its continued stability. These factors apply particularly to yard piling where uneven ground, non-homogeneous ground, or moisture may cause toppling; and on first floors or basements where floors may slope or flooring sag.

c. Location, aisle traffic, or the

FLORENCE knows it takes *concentration* to build better ranges

• For 73 years the Florence Stove Company has been specializing on one thing—building ranges and heaters. So we learned how to do that one thing BETTER.

Taking care of the many different needs in LP-Gas Ranges alone is diversity enough. The new Florence LP-Gas Ranges will be as advanced in design . . . as practical . . . dependable . . . and free from service problems as it is humanly possible to make them. Meanwhile, the job of building up demand from your customers is going on, too—full speed ahead—in the big Florence advertising campaign reaching 8 out of 10 people nationwide.

FLORENCE STOVE COMPANY . . . General Offices and Plant: Gardner, Mass. Western Offices and Plant: Kankakee, Ill. Southern Plant: Lewisburg, Tenn. Sales Offices: One Park Avenue, New York; 1459 Merchandise Mart, Chicago; 53 Alabama Street, S.W., Atlanta; 301 No. Market Street, Dallas.

FLORENCE
LP-Gas Ranges

presence of work benches or machines make it necessary to limit the height or character of material to be piled in otherwise desirable space.

d. Piling small articles. Containers suited to the nature of the article should be used.

e. Pipe or other long stock—suitable racks aid handling. Projecting ends should be protected by location, railings, or barriers.

f. Mechanical aids. The use of strong-arm methods instead of some form of stacker is a common fault. Don't try to show off. Get help, it's smart.

2. Tool housekeeping.
Racks and holders suited to the size and shape of the article should be provided for all hand tools.

3. Disposal of scrap and waste.
Suitable means of collecting scrap and waste as it is produced, and disposing of it in the most economical and orderly way possible.

4. Marking of storage space.
Clear marking of aisles and of spaces reserved for small storage with prohibition of piling, or placing materials or articles in aisle space.

5. Leaks, drips, and spillage.
Oil pans and drip pans can be used to keep oil and other spillable material off the floor.

6. Projecting nails.
Nails left projecting when kegs, barrels, or boxes are opened constitute definite invitations to injury. Nail punctures are particularly likely to become infected, often by tetanus (lockjaw) germs. When kegs or barrels are opened, the nails should either be drawn or bent over and the point hammered into the wood with hammer and metal block.

7. Bad housekeeping is a major cause of fires.
A very large portion of fires start in rubbish or in oil-soaked clothes, or are made more serious by the presence of unnecessary inflammable or readily combustible materials on which to feed.

8. Housekeeping is more than cleanliness. It is orderliness, too.
A place is in order when there are no unnecessary things about and those things that are necessary are in their proper places.
A place is in order if it is clean, floors non-slippery from grease, etc., light bulbs and windows clean, walls kept well painted, machinery and equipment kept clean and in order and if operations are carried on in an orderly manner.

B. Equipment.

1. The condition of all portable equipment on which men climb or stand or from which they work, is important from a safety standpoint. This includes portable ladders, steps, horses, scaffold planks, etc.

2. Tools, defective through use, are prolific sources of injury. This applies not only to the familiar hand tools such as chisels, wrenches, etc., but also, because of their increased use, to power hand tools, such as grinders, drills, etc.

3. Floor maintenance. Roughness, slipperiness from wear, holes, splinters, and poor patching can contribute heavily to the two sources of injuries that are commonly most important numerically, namely, stumbling and slipping, tripping and falling.

4. Unless properly maintained

FROM COAST TO COAST

DEALER'S CHOICE *is*

WELBILT

World's biggest selling popular priced L.P. GAS *ranges*

WELBILT GAS RANGES are everything their name implies. WELBILT owners everywhere are unanimous in their satisfaction with the unexcelled performance, smartness of design and economy of these outstanding ranges. Dealers make special efforts to feature **WELBILT GAS RANGES** because they sell quickly and profitably.

FRANCHISES AVAILABLE

To Select Dealers and Distributors. Inquiries are invited

a great team for sales and profits!

WELBILT STOVE COMPANY
INCORPORATED
MASPETH, LONG ISLAND NEW YORK

World's Biggest Selling Popular Priced Ranges

machine guards and safety devices not only fail to protect, but, through giving a false sense of security, may be worse than no protection at all.

5. Electric wiring becames unsafe, not only through use, but from temporary repairs, alterations, or additions. "Temporary" jobs tend to become permanent unless carefully limited to necessities and immediately made standard when the emergency has passed.

6. A high standard of maintenance is necessary to the safety of such equipment as slings, chains, and tackle, pressure vessels, extension cords, and personal protective equipment.

7. The tools used on any specific job should be adequate for that particular job. Don't try to adapt the tools to the job or the job to the tools.

8. Goggles, shields, etc., should be available at the point where they will be needed.

9. Proper lighting is important because it is axiomatic that with good lighting, replacing poor lighting, accidents decrease.

10. Stairs and defects.
    Risers not of equal height.
    Risers not filled in.
    Treads not of equal width.
    Split, worn, or uneven treads.
    Treads too narrow.
    Treads slippery or sloping outward.
    Loose or missing railing.
    Lack of hand clearance at railing.
    Stairs too steep.
    Inadequate lighting.
    No toe boards on stair landings.

11. Fixed ladders and defects.
    Uneven rung spacing.
    Bent, loose, or missing rungs.
    Lack of toe clearance at back of ladder.
    Ladder loose.
    Lack of hand-hold at top of ladder.
    Ladder sloping outward at the top.
    Slippery rungs and rails.

12. Portable, straight ladders and defects.
    Broken, loose, or missing rungs.
    Unsound, improper, or weak material.
    Unevenly spaced rungs.
    Rungs poorly secured.
    Split or patched rails.
    Lack of proper feet.
    Lack of batter.
    Lack of cross braces.

13. Step ladders and defects.
    Broken, missing, or loose steps.
    Split or broken side rails.
    Cross-grained, broken or missing spreaders.
    Too light construction.
    Poor material.

14. Horses and defects.
    Ends overhanging supports in bad condition.
    Weak, missing or loose bracing.

C. Methods.

1. How to lift.

2. How and when to use skids, dollies, etc.

3. How to connect tank cars properly.

4. How to unload heavy appliances and install them in customers' homes.

5. How to use specific tools for specific jobs.

6. How and when to use goggles.

7. How to dismount from a truck or get down from a platform. Do not jump.

8. Insist customer keep dogs confined while you are on premises. Mark delivery ticket or customer's map if

customer has an unmanageable dog.

9. Use care in walking through tall grass to prevent foot injuries caused by stepping on nails.

D. Men.

1. Not properly trained or only partially trained.

2. Indifferent or careless attitude.

3. Tendency to take a chance.

(Example) A bottle contains 300 pills and all of the pills look alike. One of the 300 is deadly poison. Knowing that to be the case, would you take a chance on eating one of the pills? Accidents are just like that bottle of pills—299 of them may not result in a serious injury, but after you get the "right one" it doesn't matter so much about the others.

4. Faulty behavior, consisting of:

a. Doing the wrong thing.

b. Failing to do the right thing.

c. Overdoing the right thing.

d. Not doing enough of the right thing.

e. Wrong timing.

f. Haste, without due regard to safety.

5. Off the job accidents.

a. Statistics show that employes are safer at work than at home.

b. Don't leave your safety-mindedness at the plant or office. Carry it with you before and after, as well as during working hours.

c. Any accident, at home or at the plant, costs the employer money and it costs the rest of society a loss in production which can never be regained.

Review accidents during the past twelve months and discuss their causes and how they could have been prevented.

Rationing of Motor Trucks Will End on Dec. 1

Rationing of new commercial motor vehicles, including trucks, truck-tractors and trailers, which has been in effect since March 9, 1942, will end on Dec. 1 according to announcement made by the ODT.

Beginning Sept. 22, any person desiring to buy a new commercial motor vehicle will not be required to file an application with ODT. Orders may be placed with a dealer.

Starting Oct. 1, the ODT discontinued the issuance of certificates of transfer covering new commercial vehicles.

In November, dealers are required to give preference in the delivery of vehicles to holders of certificates who placed orders with them before Oct. 1. In November, dealers may deliver vehicles to any person not holding a certificate, provided the dealer has not made commitments to a holder of a certificate prior to Nov. 1. All certificates will expire after Dec. 1.

WPB Authorities Now Available To Civilian Industry

The War Production Board in September set up an Industry Personnel Committee to assist WPB employes in relocating with industry. This committee, appointed by J. A. Krug, Chairman of WPB, classified by skills all employes leaving the Board within the next few weeks.

"These people are of high calibre," Mr. Krug said. "In their service to their government in time of war, they have added to the experience they brought to WPB. Industry, I am sure, knows through having worked with these people that they have the 'know-how' to get a job done. I sincerely believe that industry needs them."

Dependable Carburetion

VITAL

TO THE OIL INDUSTRY

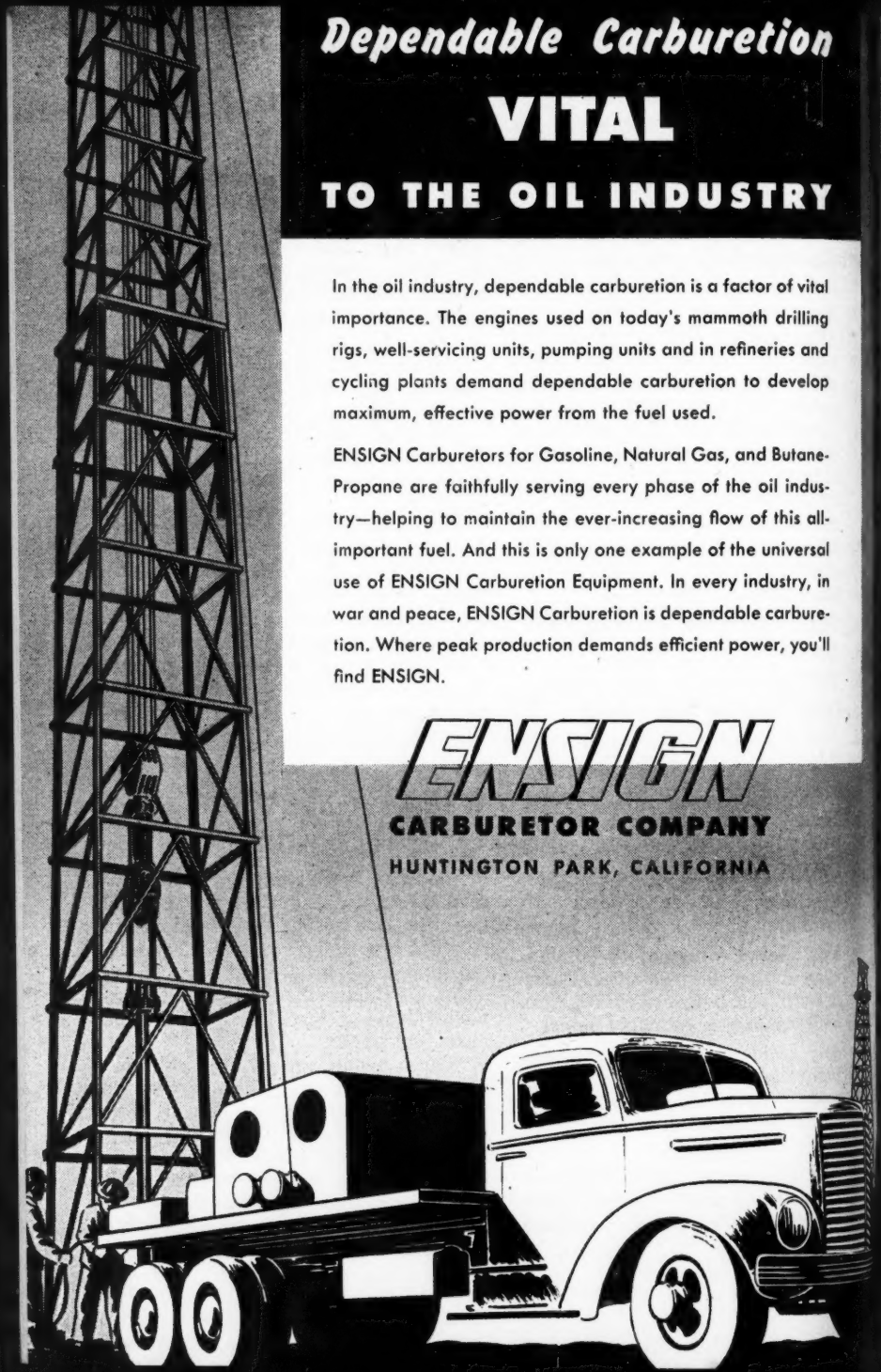
In the oil industry, dependable carburetion is a factor of vital importance. The engines used on today's mammoth drilling rigs, well-servicing units, pumping units and in refineries and cycling plants demand dependable carburetion to develop maximum, effective power from the fuel used.

ENSIGN Carburetors for Gasoline, Natural Gas, and Butane-Propane are faithfully serving every phase of the oil industry—helping to maintain the ever-increasing flow of this all-important fuel. And this is only one example of the universal use of ENSIGN Carburetion Equipment. In every industry, in war and peace, ENSIGN Carburetion is dependable carburetion. Where peak production demands efficient power, you'll find ENSIGN.

ENSIGN

CARBURETOR COMPANY

HUNTINGTON PARK, CALIFORNIA



Odorless Butane Supplants Diesel Smoke

By PAUL LADY

ALL B-P Gas dealers operating in areas where the transportation of livestock by truck is advantageous will be interested in the experiences of the Calhoun Brothers Transfer Co., with headquarters in Phoenix, Ariz. This organization has for many years hauled cattle from the Phoenix area to markets in Los Angeles, more than 400 miles away.

In the past, diesel engines were used to a large extent to power the truck and trailer units which total, when loaded, as much as 74,000 lbs. From the standpoint of power and economy, diesel proved practical for these extremely heavy units. However, one fact mounted in importance as the use of diesel became prevalent. The cattle were getting sick from the fumes and smoke of the diesels.

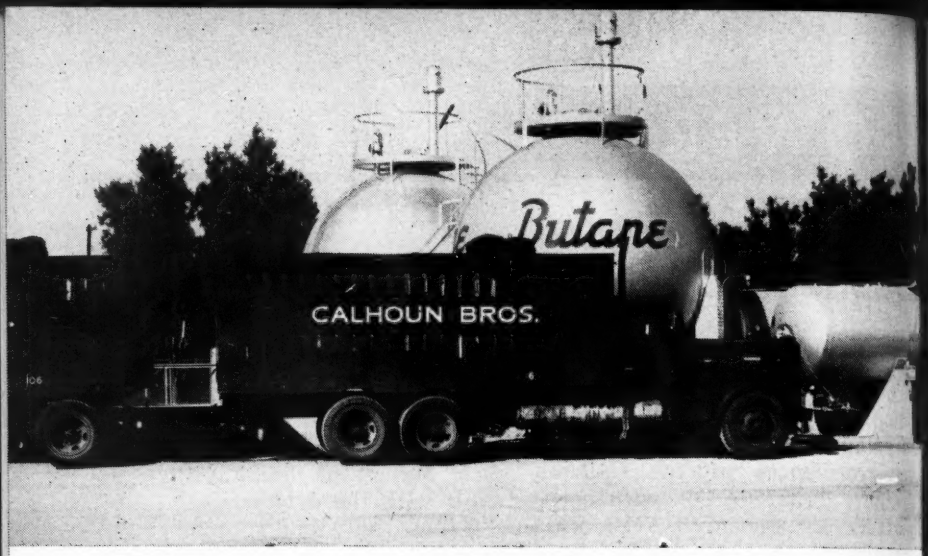
This fact meant sick livestock delivered to the pens in Los Angeles. It often meant extra days of feeding and care by the shipper before the animals could be turned over to the buyers. In many cases it meant loss instead of profit.

Early in 1938 the Calhoun Brothers decided to try to overcome this difficulty by using butane on their large units. It had been used on their smaller trucks with satisfactory results. The changeover was made and found to be most successful mechanically—and a hit with the drivers.

From the standpoint of cattle shippers, the new fuel was revolutionary. Cattle shipped from Phoenix to Los Angeles arrived clean and well and could be turned over to buyers immediately. It meant faster shipping time, as well, as the elapsed time between Phoenix and Los Angeles had been cut from 14 hours for diesel to 10 hours for butane. Cattle could now be shipped from Phoenix several hours later and still arrive at the Los Angeles stockyards ahead of the diesels.

It goes without saying that cattle haulers using the Calhoun service today insist on butane powered trucks. Many times when these trucks are not available to make deliveries and it would be necessary to hire diesel trucks from outside sources, the shippers will postpone the shipping date until their butane trucks return. Most of them say they would rather wait a week than to ship by the "smokers."

The Calhoun Brothers have found many other good reasons for converting their entire fleet to butane. Besides the elimination of smoke



Calhoun Bros., shippers of livestock from Arizona to the Los Angeles market, load up a converted diesel truck with liquefied petroleum gas at the dispensing station of Butane Corp., Phoenix, Ariz.

and cutting of running time, it has been found that a great saving can be realized on oil consumption and an increase in motor life.

Butane powered trucks go 15,000 miles—or a total of 15 trips—before oil is changed. Diesels go 1000 miles—or one trip—before the oil is changed. A similar filter is used on both butane and diesel operated trucks. The diesels use five gallons of oil for each change. The average gas truck uses from 2 to 5 gallons.

Experience shows that motor life is doubled when butane is used. Butane powered trucks average 175,000 miles before a major overhaul is needed. One Calhoun truck recently reached 191,000 miles before the motor was removed. (It is the practice of this company to replace the motor when it reaches the overhaul point.) Checks show that the trucks go approximately 130,000 miles before a ring job is needed.

Today the Calhoun Brothers operate nine heavy duty trucks on butane. This includes seven semi-trailers and two truck-trailer units. Of these, two are Hall-Scotts, the rest Whites and Chevrolets.

This fleet averages 75 loads to the Pacific Coast each month. Twenty-five of these are the truck-trailer units. The trucks are fueled in Phoenix at the truck filling station of the Butane Corporation. At this modern B-P Gas filling station the tanks are filled with sufficient fuel to carry them through to Los Angeles.

In relating their experience with butane, the Calhoun Brothers agree that B-P Gas is indeed the superior fuel for all types of livestock hauling. There seems little doubt that it will in time become standard prac-

ONLY THE *Vaporator* OFFERS
— ALL THESE FEATURES

★ COLD-PROOF
★ SIMPLE TO INSTALL
★ EASY TO MAINTAIN
★ FIVE SAFETY FEATURES
★ FULLY GUARANTEED
★ INEXPENSIVE TO BUY

A COMPLETELY SELF-CONTAINED SMALL GAS PLANT

MODEL 1300

The Algas VAPORATOR gives you "city-gas" dependability. Requires no water or electrical connections. Eliminates tank freeze-ups and need for pumping out "dead-ends."

For Details write for Bulletin V-1
1109 Santa Fe Avenue
Los Angeles 21, California

ALGAS

AMERICAN LIQUID GAS
LOS ANGELES CORPORATION CHICAGO

tice to use butane or propane for all this type of transportation.

The advent of the new 400 series Hall-Scott engine has done much to aid the efficient use of B-P Gas for power, according to the Calhouns. They state that never before have they had gas engines large enough to compete with diesels. All gas engines have been too small for the heavy duty hauling required. With the new Hall-Scott, which develops 300 h.p. on gasoline—325 h.p. on butane—truckers can outhaul the standard diesel rigs in any type of work.

New Thermal Efficiency Record Set by Gas Diesel Engine

A new world record in engine thermal efficiency, higher than anything attained before from internal combustion or heat engines, including the widely publicized gas turbine, has been accomplished by a Cooper-Bessemer turbo-charged gas-diesel engine.

This new thermal efficiency record is in excess of 40%.

When it is considered that the best thermal efficiency of an automobile gasoline engine is not greater than 25%, and various other types of steam, gas and gas turbines are much lower, some idea of the importance of this new achievement can be realized.

Lift Wartime Truck Delivery Restrictions

Wartime restrictions on wholesale and retail motor truck deliveries will be lifted throughout the nation by ODT on Nov. 1.

On that date, all government regulations that have controlled the frequency of deliveries and the types of deliveries that could be made will be removed.

Special Manifolds Better For Butane

By MAX ELLIS

Ellis Manifold Co., Huntington Park, Calif.

PROBABLY no improvements connected with mobile installations in the butane business has caused as much pro and con discussion as butane manifolds.

Naturally, there are many claiming that the stock truck equipment is satisfactory, and still others insist the stock manifold is faulty for butane. In order to bring some light upon the subject, let us analyze the stock manifolds first and then draw our conclusions.

First of all, naturally, they are designed for medium structure, wet fuel. Special care must be taken to eliminate puddling of the gas and to keep a high velocity to prevent separation of air and fuel. Also, to be considered in conjunction with the above, is proper heating of the wet gas in order to reach a higher vaporization point.

Now, to utilize butane dry gas, we can readily see that we are striving to gain almost the opposite results. Probably the most important factor to consider, particularly with truck jobs, is that we must have as cool a manifold as possible so as not to over-heat our fuel, resulting in over-expansion, and therefore reducing the volume the intake valves can draw into the combustion chamber.

I believe the point that has been overlooked most of all is the comparison of air fuel ratios of the two fuels. Gasoline, we know, operates best on approximately 12.6 pounds air per pound of gas. Butane, of course, has an ideal mixture of around

Now, at last, a high pressure dispenser made specifically for Liquefied Petroleum Gases—and bearing the precision-famous name ADEL. Incorporates many new safety and automatic devices including patented Buta-fill nozzle, automatic closing control valve, excess flow valve, vapor collapsing valve, pressure relief valves and other accesories which may be purchased separately. ADEL representatives will be glad to give you complete information and furnish engineering help with your piping problems. Place your order now for the earliest delivery.

SHIELDS-HARPER
Coastwise Sales and Service
Seattle 1, Wash. • Oakland 12, Calif.
Portland 9 Ore. • Los Angeles 7, Calif.

ADEL

Address all inquiries to:
ADEL Precision Products Corp.,
Burbank, California
or to Distributor in your district.

18 to 19 pounds of air per pound of fuel (which would be shown if we had an analyzer built for butane readings).

Now, what happens when we try to draw 18 or 19 pounds of air through a pipe designed to pass 12 or 13 pounds of air? One can see that this is impractical, resulting not in lean mixtures but insufficient mixtures, in volume, being passed into the combustion chamber. This should bring us to the fact that more area is absolutely essential to derive the greatest efficiency from butane.

Of course I am not implying that any gas manifold will not handle butane, for we all know that there are many fine running conversions at the present, giving power and mileage equal to gasoline.

The whole problem, as I see it, should not be that a special manifold is an absolute necessity to make an engine operate on butane, but that it is by now an accepted fact that we can exceed gasoline power and mileage by utilizing the fuel as we best know how. I have definite proof that this is possible with "Bu-Power" manifolds, and to all concerned with installations this is naturally an unlimited help.

I believe that some day we will have other improvements to further help us utilize this most perfect fuel to a still higher degree.

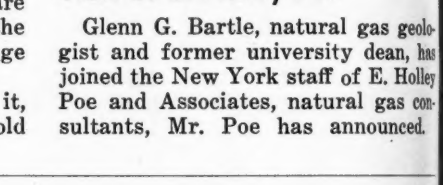
Glenn G. Bartle Joins Staff of E. Holley Poe

Glenn G. Bartle, natural gas geologist and former university dean, has joined the New York staff of E. Holley Poe and Associates, natural gas consultants, Mr. Poe has announced.

For *Added Power* with LESS FUEL!

Specify

Butane-Propane Manifolds
(Now in Stock)



SIX REASONS WHY

1. No Hot Spots
2. Even Distribution
3. No Restrictions
4. Proper Finning
5. Larger Internal Area
6. Greater Efficiency

(Now in Stock)

BU-SEAL Compound offers a safe, sure defense against leaks. A modern, new type sealing compound for LP-Gas valves and fittings. **BU-SEAL** should be a "must" on every dealer's bench. If you haven't used **BU-SEAL**, order some today!

ELECTRIC AND CARBURETOR ENGINEERING CO.

2723 E. 8th Street — *"Pioneers of the Butane Industry"* — Los Angeles 21, Calif.

CURRENT READING

Reviews of new books, pamphlets and articles published in recent magazines of interest to technicians and executives in the liquefied petroleum gas industry. Those interested in reading any complete article or book should write to the publications named.

•

The Home Mechanic's Handbook—Published by D. Van Nostrand Co., Inc., 250 Fourth Ave., New York 3. Six sections of comprehensive working methods covering painting and decorating, woodworking, metal working, plumbing, masonry and electrical work. Each section is authored by an expert in his field.

Of particular interest to B-P Gas operators is the section on plumbing, Section IV. Various kinds of pipe used in residential plumbing work are described with their uses, selection, sizes and other practical facts. The techniques of pipe fitting and plumbing work give the reader the completely portrayed operation of installation, replacement or repair of iron or steel piping, copper tubing or brass piping.

A detailed account of a complete insulation job is given with photographs showing each step. Measurement of "runs" in piping, methods of cutting, reaming and threading the pipe to the measurements and the proper sequence of steps in assembling the piping system are covered. Price: $5.95.

Chemical Composition and Road Antiknock Performance of Possible Postwar Motor Fuels—J. F. Jordan. "Petroleum Refiner," Sept., 1945, pp. 97-103. This discussion proposes to show the greater meaning of actual road antiknock performance of motor fuels over their indicated laboratory numbers. More, it tends to demonstrate that greater possibilities for improving fuel performance are possible with recent refining methods than have been realized to date. Greater awareness of the implications of the newer refining methods for improving road antiknock characteristics of motor fuels will permit selection of equipment which will complement existing facilities.

Isopentane Produced by Liquid-Phase Isomerization—L. S. Galstaun. "Chemistry and Metallurgy," Sept., 1945, pp. 109-111. Isopentane, now vitally important to our high-octane aviation gasoline program, has promise as an ingredient in postwar premium motor fuels. Isomerization of low-octane pentanes from natural gasoline may represent one way of upgrading these paraffins into more valuable gasoline constituents. The Tide Water Associated pentane isomerization unit at Avon, Calif., described in this article, is the first commercial plant.

Partial Combustion of Gas with a Deficiency of Air—F. E. Vandaveer and C. G. Segeler. "Industrial and Engineering Chemistry," Sept., 1945, pp. 816-820. For many heating operations the chemical effect of flue products may be disregarded, but for others, such as heat treating and ceramic manufacturing, special care must be given to the composition of

the atmosphere surrounding the work. Partial combustion with a deficiency of air has been studied for burning natural, butane, and coke-oven gases with variations of air supply from 10 to 100% of that needed for complete combustion. Limits have been established below which combustion was not self-supporting. These were 65% of the required air for natural, 60% for butane, and 53% for coke oven gas. By the use of additional external heat, these limits were materially lower. Ratios of carbon monoxide to carbon dioxide and of carbon monoxide to hydrogen have been determined for these gases.

Bureau of Standards: Research Paper RP 1640—Specific Heats of Gaseous 1,3-Butadiene, Isobutene, Styrene, and Ethylbenzene, by R. B. Scott and J. W. Mellers. Research Paper RP 1641—Free Energies and Equilibria of the 18 Octanes, by E. J. Prosen, K. S. Pitzer and F. D. Rossini. Research Paper RP 1642—Heats of Combustion and Formation of the Paraffin Hydrocarbons at 25°C., by E. J. Prosen and F. D. Rossini.

First U.S. Gas Turbine Demonstrated—J. H. Kunkel. "Petroleum Engineer," Sept., 1945, pp. 98, etc. The turbine discussed in this article is of interest to oil and gas men both because of the type of fuel used and its wide potential application.

Electronic-Type Instruments for Industrial Processes—P. S. Dickey and A. J. Hornfeck. Transactions, A.S.M.E., July, 1945, pp. 393-398. This paper describes a new type of measuring and controlling instrument for general process work. The authors discuss the use of electronic equipment in fields of measurement where mechanical or electromechanical instruments have previously been employed. Typical measuring circuits for different problems are illustrated. Equipment for automatic computation of the results obtained from several primary measurements is discussed. Simplification and standardization of instruments for process control through the use of electronic devices is stressed as the important advantage of the equipment described.

Tomorrow's Automotive Fuels and Engines—O. W. Willcox. "World Petroleum," Aug., 1945, pp. 57-59. A prediction as to future trends in automobile engine design, and the amount and quality of fuels needed to supply the demand.

The following papers were among those presented before the Division of Petroleum Chemistry of the American Chemical Society, Sept., 1945, meeting:

Determination of the Purity of Hydrocarbons by Measurement of Freezing Points, by A. R. Glasgow, Jr., A. J. Streiff and F. D. Rossini.

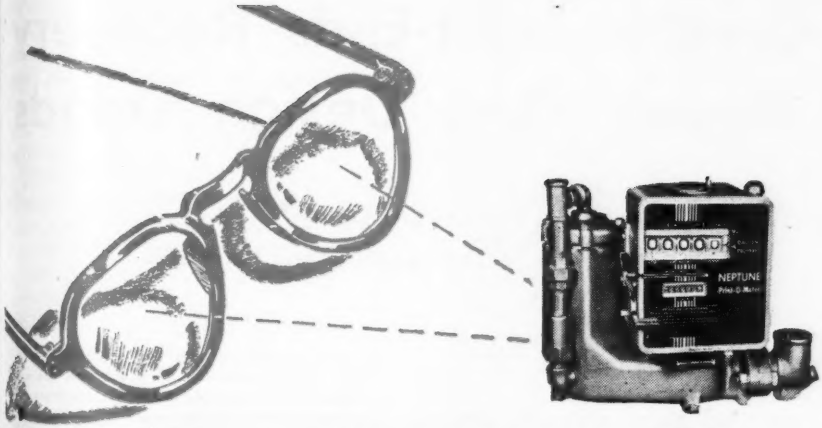
Assembly and Calibration of a Density Balance for Liquid Hydrocarbons, by A. F. Forziati, B. J. Mair and F. D. Rossini.

Isomerization of Alkanes—1: Effect of Olefins upon the Isomerization of n-Butane in the Presence of Aluminum Halide-Hydrogen Halide Catalyst, by H. Pines and R. C. Wackher.

Conversion of n-Heptane to Isobutane with Metal-Aluminum Chloride Catalysts, by O. Grummitt, E. N. Case and C. V. Mitchell.

Dehydroisomerization of n-Butane, by H. S. Bloch and R. E. Schaad.

Utilization of Liquid Petroleum Gases Replacing Manufactured Gas—E. G. Boyer. "American Gas Journal," Aug., 1945, pp. 11-16.



Keep Your Profits in View

Glance at the register of a Neptune Red Seal LP-Gas Meter, and you have your profits in view—because Neptune metering accounts for *every* gallon handled. In addition, Neptune metering speeds truck loading and delivery operations—helps detect losses due to leakage.

Let customers *see* exactly what they get and pay for—meter *your* tank truck deliveries. And with a Print-O-Meter Register on your Neptune Meter you provide accurate printed invoices. No need to carry inventories in tanks "all over the map," or bother with unnecessary bookkeeping—each delivery is a complete transaction.

Accurate Red Seal Meters protect your product investment, foster good-will, give long, economical service, with minimum maintenance. Let Neptune keep an accurate record before your eyes! Get the facts about money-saving Neptune Red Seal LP-Gas Meters. Write for Bulletin 779.

Neptune RED SEAL Meters

accurately measure LP-Gas. Long-life measuring chamber has only *one* moving part—the piston. 1¼ Inch "Compact Type" 1D Meter, shown above, has a Direct Reading Register with Print-O-Meter feature. Other register types available.

NEPTUNE RED SEAL METERS

NEPTUNE METER COMPANY
50 West 50th Street • New York 20, N. Y
Branches: Atlanta, Boston, Chicago, Dallas, Denver, Kansas City, Mo., Los Angeles, Louisville, Philadelphia, Portland, Ore., San Francisco, and Long Branch, Ontario A-665

Greater Light-Ends Recovery Shapes Plant Design Trends

By V. V. JACOMINI*

Design Engineer, Hudson Engineering Corp., Houston, Texas

The increasing call for liquefied petroleum gases to meet war needs and the necessity of conserving natural resources by pressure maintenance projects has had considerable effect on the design of natural gasoline plants. In this article, the author discusses changes in design and engineering features of natural gasoline and cycling plants brought about by the war and forecasts the future trend in plant construction.

THE emphasis in design of natural gasoline plants is tending more and more strongly toward greater recovery of butanes, propane and even ethane in grades of higher purity. This requires higher absorption pressures, greater oil circulation, increased fractionating facilities and more diversified storage, all of which tend to increase the investment in this type of plant.

Allied with this trend is that of pressure maintenance, which is of increasing importance as a means both to increase the recovery of oil and to store the dry gas (methane and ethane) against future needs and more equitable prices.

Where formerly natural gasoline plants were installed merely for the recovery of natural gasoline and under which conditions they had to bear the entire cost, we now find that most of the new plants are being installed as an integral part of pressure maintenance projects and the costs are therefore more widely distributed, especially the cost of compressing the gas. Since pressure maintenance usually requires high pressures, often in the range of 2000-4000 psig, the higher absorption pressures are available.

As an illustration of this trend, prior to the present war natural gasoline plants were operated at low absorption pressures (up to about 150 psig), the operating pressures being determined by an economic study of the cost of compressing the gas as compared to the cost of circulating absorption oil. Recoveries then were more or less pegged at approximately 50% in terms of butanes, controlled by the primary consideration of recovering all of the pentanes and heavier.

Today, absorber operating pressures of 300-800 psig are being adopted and recoveries are now being expressed in terms of 50-80% of propane, controlled by the primary consideration of recovering 90-100% of the butanes.

The trend toward higher recoveries of the lighter products applies also to cycling plants. However, unlike natural gasoline plants, these higher recoveries have not affected the ab-

* This article originally appeared in the "Technical Section of National Petroleum News," issue of May 2, 1945, and is reprinted with permission.

sorber pressures since they are normally in excess of 1200 psig and because these operating pressures are controlled by the cost of compressing the gas for reinjection into the reservoir, not by the higher recovery of light products.

These higher recoveries, while not affecting the absorber pressure, do mean greater oil circulation, increased fractionating facilities and more diversified storage, the same as for natural gasoline plants.

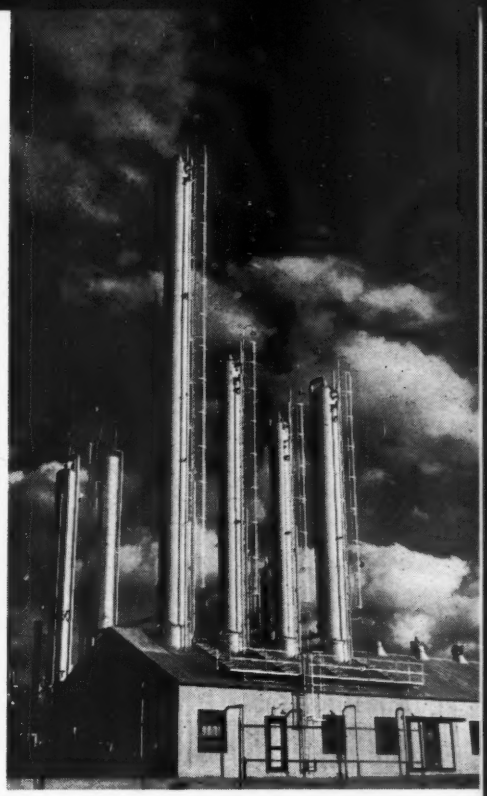
The military demand for high octane aviation gasoline naturally has greatly accelerated the trend to higher recoveries and we must therefore look to some readjustment in the postwar period immediately following conclusion of hostilities. However, it is not expected that following this period of readjustment there will be any great surplus of light ends.

Although the refiner with his enormous expansion of catalytic cracking will produce and recover large quantities of light ends, we may expect the compensating factor that he will be operating for the production of motor gasoline of from 8-13 lb. vapor pressure—which gasolines will require large quantities of butanes as compared to the wartime operation for the production of low vapor pressure, substantially butane-free aviation gasoline.

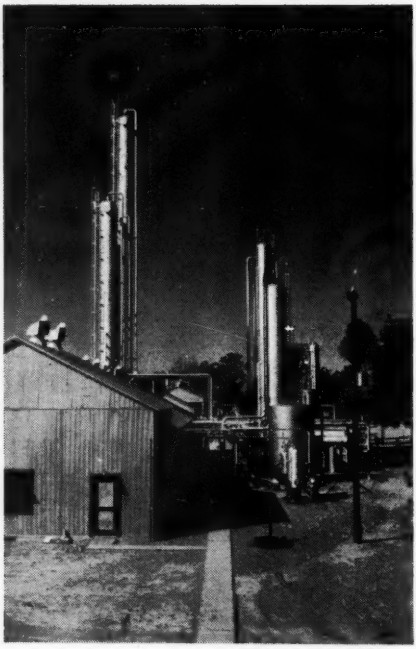
It is true that the refiner now consumes large quantities of butanes in the manufacture of aviation gasoline by first processing these butanes in isomerization and alkylation plants. It seems equally true that wartime experience will result in lower operating costs for these processes, thus making possible, in many cases, the postwar operation of these plants with their products going into high quality motor fuel instead of aviation fuel.

Another factor in favor of a good postwar market for these light ends is the expected rapid expansion of the now restricted liquefied petroleum gas market. In this market the war has brought about a definite trend toward higher pressure storage for the reason that the butanes formerly used now are going to the refiner for further processing into ingredients for aviation gasoline, thus leaving for the B-P Gas market only propane, which requires storage facilities for pressures up to 250 psig.

With the installation of high pressure storage, as the materials become available, it can be expected that many users will continue to purchase pro-



Fractionation columns at Warren's Crossville, Ill., plant where isobutane, n-butane, propane and natural gasoline are made.



The Griffin, Ind., plant of Warren Petroleum Corp.

pane, thus leaving the butanes for the refiner who, as pointed out above, will have the equipment available for processing them for ultimate use in high quality motor gasoline.

Last, but perhaps not least in the long run, will be the ever increasing demand by the chemical industry for ethane, propane and, in some cases, butane as raw products for the manufacture of a varied list of products.

Already the construction of large plants on the Gulf Coast has materially increased, in that area, the demand for ethane, propane and butanes. With the recent announcement of other chemical plants proposed for this area, it is expected that the chemical industry will become an important factor in the postwar market.

Increased Absorption Capacity

This trend has forced an increase in absorption capacity. In the cases of the older plants this increase in capacity is being attained by an increase in lean oil circulation, by higher absorption pressures, by refrigeration, or by a combination of these, any of which usually requires major alterations to an existing plant. Each plant will present its own problems and no general rule as to how this increased capacity is acquired can be laid down.

For instance, in one Gulf Coast cycling plant, to meet a market demand for 3500 b/d of butanes and propane, the added capacity is being provided by increased oil circulation, requiring additions to the absorbers, heat exchangers, condensers and still, together with a complete revamping of the pumping and piping facilities.

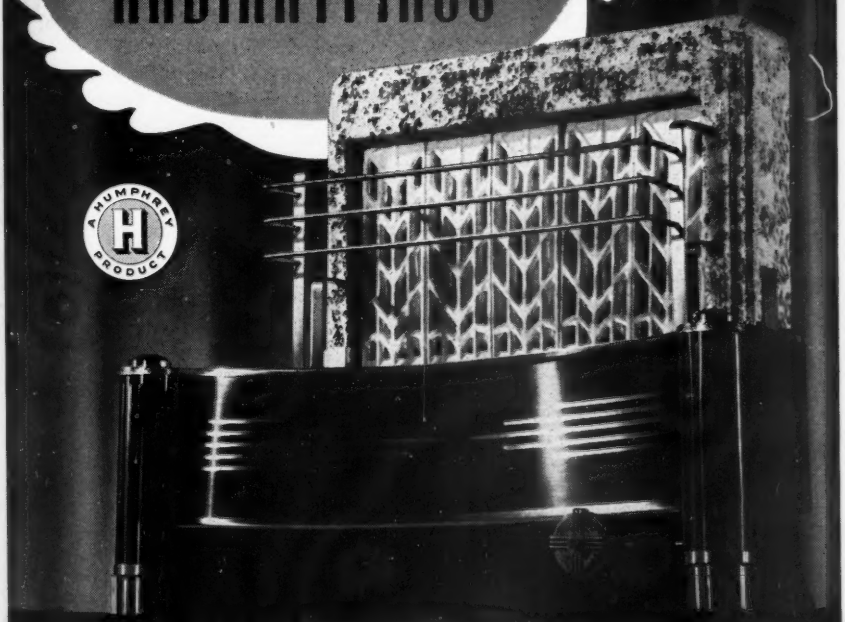
Regardless of how this increased capacity is brought about, it brings with it another problem, namely that of recovering as a liquid product the propane and heavier constituents thus absorbed. Here we encounter the problem of eliminating methane from the rich oil ahead of the still. Formerly it was sufficient to flash the rich oil at reduced pressure and to reabsorb the butanes from the flashed vapors, which could be accomplished without extreme reductions in the pressures on the rich oil.

However, with high propane recovery it is necessary to further reduce the methane content of the rich oil which, if flashing of the rich oil is used, means lower flash pressures and greater oil circulations for the recovery of propane from the flash vapors. Because of the excessive quantities of absorption oil thus required, the industry has been forced to develop

The Nation's Choice IN RADIANT HEATERS

Smart styling, rugged construction and unsurpassed heating efficiency make Humphrey Radiantfires the Nation's Choice in radiant heaters. In their field, they are the standard of comparison.

HUMPHREY RADIANTFIRES



GENERAL GAS LIGHT COMPANY KALAMAZOO, MICHIGAN

23 Warren St., New York City 2nd Unit Santa Fe Bldg., Dallas 225 Eleventh St., San Francisco

new methods of reducing the methane content of the rich oil.

At present most operators are installing or are considering the installation of some kind of rich oil demethanization. Straight fractionation of the rich oil for the separation of methane is not economically sound so a compromise system has been developed. This consists of stripping methane from the rich oil in fractionators, followed by the reabsorption of the propane and heavier constituents from the stripped vapors. Demethanization of this type can be operated at pressures up to about 200 psig and bottom temperatures up to about 400° F.

With the advent of these high recoveries of light ends and the market requirements for pure products, considerable revamping of the fractionating equipment has been necessary in those plants converting to these products. Formerly the product fractionating equipment of a natural gasoline plant usually consisted of a stabilizer for the manufactuer of 14-26 lb. vapor pressure natural gasoline, followed by a smaller fractionating column for the manufacture of liquefied petroleum gas of vapor pressures up to 100 lbs.

As compared to this simple fractionation, a plant to manufacture products for the present day market must be equipped with a deethanizer, depropanizer, debutanizer and a butane splitter; in some cases a deisopentanizer and a product fractionator also are required.

For natural gasoline plants the sequence of fractionation generally used is de-ethanization, depropanization and debutanization, followed by the splitting of the butanes into an overhead product of isobutane and a bottom product of normal butane.

For cycling plants this sequence has been modified. The raw product is first debutanized, after which it passes to a distillate fractionator where it is separated into aviation gasoline or base stock for motor gasoline, naphthas, kerosene, mineral seal oil and residuum.

The totally condensed overhead from the debutanizer passes to a depropanizer, the bottom product of which passes to the butane splitter for production of isobutane and nor-

Reflux accumulators for 5-column fractionation at Hawkins, Texas, plant.

IT'S AN ILL WIND THAT *Blows* NO GOOD—

The superiority of GAS cooking service—the unfailing dependability of UNIVERSAL GAS RANGES . . . . both, under the difficulties of war-time living, have proven full right to prized consumer preference.

To use the new abilities and skills—materials and methods that have come out of our production for war, to make UNIVERSAL even more worthy to be *America's Preferred Cooking Choice* is our objective . . . . its realization will bring further assurance of continued acceptance for GAS—*America's Preferred Cooking Fuel!*

CRIBBEN & SEXTON CO.

Manufacturers of Universal Gas Ranges

700 N. SACRAMENTO BLVD. CHICAGO 12, ILLINOIS

Another view of the Crossville plant.

mal butane. The totally condensed overhead from the depropanizer passes to the de-ethanizer, the bottom product of which is liquid propane and the overhead a gas consisting mainly of ethane with some propane and methane.

The requirement of 95% purity for these light products has forced the operator to provide elaborate controls capable of operation on single component products. Where formerly fractionators (stabilizers) of 20 to 30 trays were satisfactory, we now encounter fractionators of from 30 trays for de-ethanization up to 70 trays for butane splitting.

A direct result of manufacturing a number of different pure products is the necessity for a much greater variety of pressure storage than formerly was required. Unfortunately, this increased storage cannot be had at any light cost. With the advent of higher pressure storage, up to 250 psi for propane, the question of insulated and refrigerated storage has come to the front.

However, while it might be argued that refrigerated storage results in lower steel requirement, justified from the war viewpoint, investigations indicate that the steel savings are more than balanced by the cost of insulation plus amortization and operating costs of required refrigeration. Therefore it is not expected that refrigerated storage will be used except for those products which deteriorate when stored at atmospheric temperatures.

Ethane-Propane Sold As Gas

At present, the storing of ethane or ethane-propane mixtures in the liquid phase does not appear economically sound. In the few cases in which ethane-propane mixtures are sold, they are being sold as a gas rather than as a liquid.

However, in one case involving a liquid mixture of ethane, propane and butane, the propane-butane part of the mixture is stored as such and the ethane is delivered in controlled quantity to this mixture in a small blending tank at the pump suction. When excess ethane is produced it passes direct from the de-ethanizer accumulator to the fuel gas line and there-

fore the highest pressure storage required is that for propane.

Forecasting the future trends in natural gasoline plant construction is a difficult problem at best. However, in the light of present day requirements a few sign posts may be discerned with reasonable clarity. Markets for relatively pure components undoubtedly will increase and, conversely, it is expected that the market for wide cuts containing a relatively large number of light components will decrease.

Chemically Pure Grades Will Come

The natural gasoline plant of the future will be called upon to supply what will amount to chemically pure grades of propane, butanes and quite probably iso-pentane. If the plant is located in an area where there is reasonable assurance of a long lived production, a ready market from chemical manufacturers for ethane as well may be expected.

Higher absorption pressures will become the rule with the probability in the near future of designing for propane recoveries approaching 100%, with consequent high recoveries of ethane as well. Demethanization of the rich oil will go hand in hand with the higher recoveries of propane.

More plants will be built in connection with pressure maintenance programs, thus permitting the high cost of compressing the gas to be spread over a larger base. It can be expected that legislation will be enacted to require operators to return to the reservoir all gas not being used commercially.

Storage problems will keep pace with the purity of the product and pressure storage capable of handling liquid propane will be installed as a matter of course.

Minnesota Distributor Returns from the War

Francis T. McCahill, president of Home Gas Co., Minneapolis, has returned to his old duties after an absence of three and a half years, according to Gordon Beaton, assistant treasurer of the company.

In April of 1942 Mr. McCahill entered naval service as a lieutenant in the USNR, serving in the Canal Zone and on the Galapagos Islands. He returned to the United States in July of 1943 to take a special course at the amphibious training base on the Solomons Islands, Maryland. Upon completion of this training, he was placed in command of an LST boat leaving for the European war theater and took part in the invasion of Southern France.

Upon Mr. McCahill's return from this trip to the United States he was transferred from the amphibious forces and served under Secretary of the Navy Forestal as a lieutenant commander.

Present Price Controls Should Continue, Say Industry Men

Price Administrator Chester Bowles, who recently asked the 7300 industry leaders serving on OPA advisory committees how long price controls will be needed, announced Oct. 13 that out of the first 1486 replies received, only 6% feel that all price control should end now. Another 6% say it could be eliminated by Jan. 1 of next year. The full break-down follows:

For immediate elimination	6%
For de-control by January 1, 1946	6%
By July 1, 1946	29%
Later or conditioned on supply and demand or wage stabilization	39%
No answer	20%

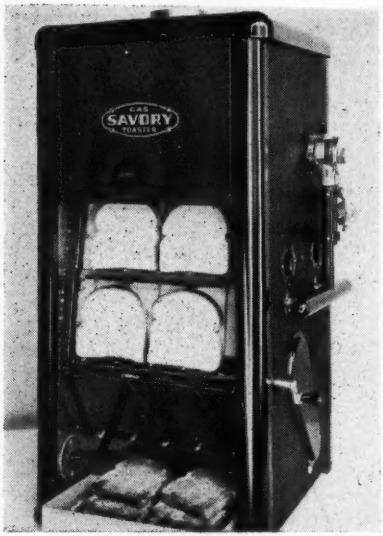
New Products

Toaster

Savory Equipment, Inc., 120 Pacific St., Newark 5, N. J.

Model: PD.

Description: Steel panels of casing are coated with crackle finished durable airplane engine enamel. Appearance fits in with heavy duty kitchen equipment or counter appliances. Has flue to carry off products of combustion. Thick insulation excellent for air-conditioned establishments.



Radiant heat conserved by highly polished non-tarnishing reflecting surfaces placed behind the ceramic elements which reflect the heat back into the toasting zone. Loss by convection is minimized by the use of dome-like construction and control of the flue opening. Loss by conduction is lessened by efficient insulation.

Six slices per min., 360 per hour; gas cost ¾ cents to 3 cents per hour; max. consumption, 12,000 B.t.u. per hr.; height, 28½ in.; width, 16½ in.; depth, 18½ in.; weight, 115 lbs.

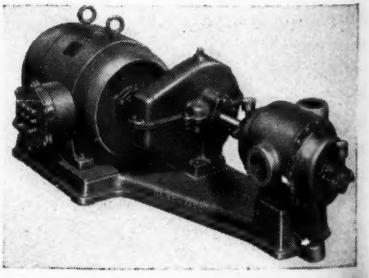
B-P Gas Pump

Production on a new series of pumps for handling propane and butane has been started at the plant of the Blackmer Pump Co., Grand Rapids, Mich., according to a statement by J. B. Trotman, general sales manager.

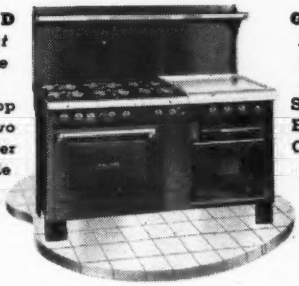
The basic design of the new pumps follows the characteristic Blackmer "bucket design" (swinging vane) principle, and the pumps are therefore self-adjusting for wear. Design work, laboratory and field tests have been under way on these units for the past two years.

Currently in production are bulk plant pumps of 35, 50 and 90 GPM, furnished as pumps only, with single-reduction oil-immersed drive and bedplate or complete with gearhead motor, and also 35 GPM truck pumps.

The problems of lubrication and sealing at the gland have been solved with a reservoir containing glycerine entirely surrounding the stuffing box, the glycerine acting as both lubricant



GARLAND
Restaurant Gas Range No. 83
Six Open Top Burners, Two Ovens, Broiler and Griddle



GARLAND
Restaurant Gas Range No. 82
Six Open Top Burners, One Oven, Broiler and Griddle

LOOK AT THE QUALITY —GET THE PRICE!

Here is value you expect from the leader! These Garland restaurant gas ranges save time because they are designed for convenience. They give better cooking results because they are engineered with advanced features. And at their low price, they soon pay for themselves through savings in operating costs. Proof again that *you can't beat a Garland!* Write for information.

Leader In Commercial Gas Cooking Equipment

GARLAND
Restaurant Gas Range No. 84
Ten Open Top Burners, Two Ovens

GARLAND
Restaurant Gas Range No. 86
Six Open Top Burners, One Oven

GARLAND

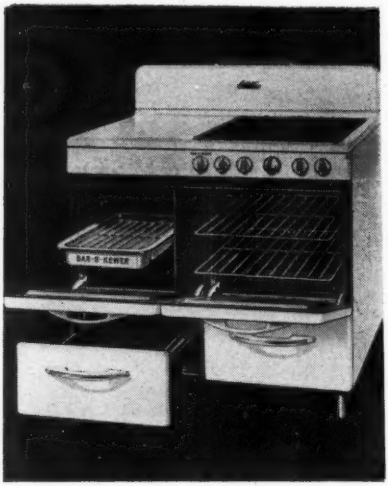
Detroit-Michigan Stove Co., Detroit 31, Michigan

GAS IS THE IDEAL FUEL AND AT ITS BEST WITH GARLAND HEAVY DUTY EQUIPMENT

and sealing agent. No gas can reach the stuffing box. The bearings are sleeve type, one on either side of the rotor.

The pumps are fitted with removable liners, which may be replaced when worn. Piping and drive are not disturbed by this operation.

The truck pumps have a separate glycerine reservoir mounted in the cab or at some other convenient place on the truck and piped to the pump reservoir with return line to the tank.



Gas Range

The Estate Stove Co., Hamilton, Ohio.

Model: The "Sweetbriar" Estate—Model 1703.

Description: Heavily insulated airflow oven; Therm-Estate oven heat control; 2 stop-type oven racks; Bar-B-Kewer with 3 in. deep, smokeless pan; one-piece cooking top; 4 Speedex high-low cooking top burners (3 regular, 1 giant); automatic top burner lighting; roller bearing utensil drawer; white porcelain enamel finish with white handles; simmer burners; and on the deluxe model, the Grid-All. Floor space required, 26⅞ in. by 38 in. The ovens are all 17 in. wide, 14 in. high and 20 in. deep.

Tubing Tools

A handy tube-working tool selector is one of the features of a new folder on tubing tools recently published by the Imperial Brass Manufacturing Co., 1200 W. Harrison St., Chicago 7. The tools are for use with copper, brass, aluminum, thin-wall steel and similar tubing.

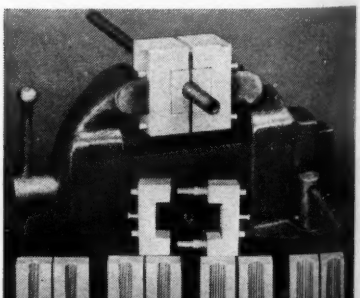
Flaring tools, tube cutters, tube benders, coil makers, pinch-off tools, swedging tools, reamers, refacing tools and soldering equipment are all included. There are also a number of handy tool kits.

Copies of this folder, designated as No. 347, may be obtained by writing to the manufacturer.

Pipe Gripper

A handy pipe gripping device has been designed to hold small pipe in any vise without crushing or marring the surface or threads. Servicemen have found that thin-walled pipe in sizes from ⅛-in to ½-in. is difficult to hold securely.

This device, known as the "Nip-



Grip," permits fast handling of pipe without damage. It consists of two light alloy retainer blocks in which hardened steel inserts are slipped to hold various pipe sizes and ⅛-in, ¼-in., ⅜-in. and ½-in. inserts are furnished. Springs automatically spread the blocks apart when the vise is opened. It can be positioned horizontally or vertically and is held by pins.

The Nip-Grip is manufactured by J. A. Campbell Co., 645 East Wardlow Road, Long Beach 7, Calif.

Gas Range

Grand Home Appliance Co., 2323 E. 67th St., Cleveland 4, Ohio.

Model: 746 (Standard)

Description: Furnished in standard and deluxe styles; 40-in. range of

flush-to-wall; one-piece top design. Elevated broiler on left and 18-in. oven on right. Cooking platform divided, with giant burners in both front positions. Charcolator radiant broiler with improved radiants and stainless steel crown sheet. "Safe-Tee-Kee," a device which permits closing off the gas supply to all burners, prevents tampering by youngsters.

Corrosion Engineers Will Meet In Kansas City Next May

The National Association of Corrosion Engineers announces dates of May 7, 8 and 9 for its 1946 annual meeting and convention, which will be held in Kansas City, Mo., with headquarters in the President hotel.

In addition to the technical programs covering the three days' sessions, there will be an exhibition of corrosion-resistant, corrosion-mitigation and various types of protective materials in the main arena of the municipal auditorium.

Technical sessions are scheduled for the same building, in the Little Theatre there, and in such additional space as may be required to accommodate the sectional and group meetings.

The program as outlined includes papers on corrosion practices as developed in representative industries, such as power plants, municipal and other waterworks, transportation companies, buried communication lines, refineries, chemical manufacturing and processing plants, and oil pipe lines. Simultaneous sessions are scheduled to permit coverage of the program within the allotted time.

Texas Truck Load Limit Increased to 48,000 Lbs.

Becoming operative on Sept. 4, a new truck load limit law went into effect in Texas which increases the permissable tonnage of motor vehicles from 38,000 lbs. to 48,000 lbs. Passed by the Forty-ninth Legislature of Texas last spring, this law did not become effective until days after the signature of the governor was affixed to the measure.

Strict enforcement of the law may be expected, according to State Highway Engineer Greer.

B-P Gas Production Declines

The production of natural gasoline and natural gasoline mixtures increased in August with continued heavy demand from refiners. The output of liquefied gases and finished gasoline decreased materially and shipments declined.

Production of Light Products from Natural Gasoline and Cycle Plants in the United States in Thousands of Gallons.

	Aug. 1945	*July 1945*	*Aug. 1944*	*Jan. - Aug. 1945*	*Jan. - Aug. 1944*
Natural gasoline	190,019	188,623	191,940	1,444,907	1,446,433
Natural gasoline mixture	34,747	33,645		248,207	
Raw condensate	32,429	34,308		289,738	
Liquefied petroleum gases:					
Commercial butane-propane mixture	19,765	18,799		182,845	
Normal butane	30,927	33,565		290,230	
Propane	23,219	22,148		183,420	
Other mixtures (L.P.G.)	15,734	16,303	75,558	115,990	597,702
Iso-butane	13,849	14,114	16,422	113,769	137,802
Iso-pentane	11,985	13,084		101,258	
Finished gasoline and naphtha	20,103	22,185		157,403	
Other products	2,470	2,943	76,944	24,448	543,312
TOTAL	395,247	399,717	360,864	3,152,215	2,725,254

Old WPB Gives Way to Civilian Production Admin.

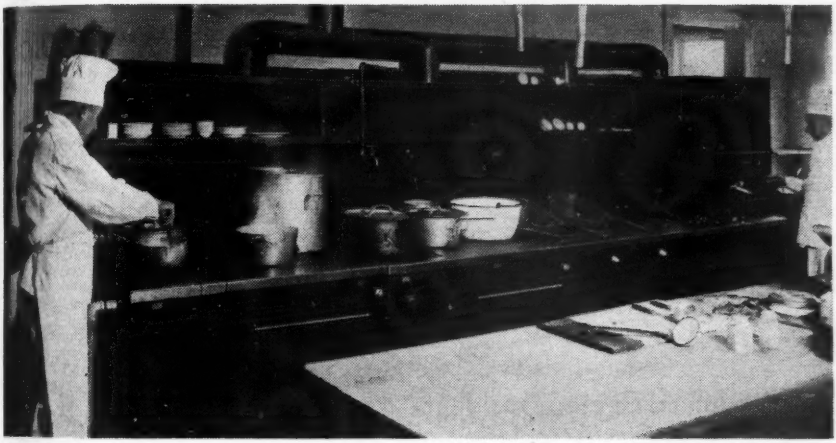
Following the announcement by President Truman of his acceptance of the resignation of J. A. Krug, Chairman of the War Production Board, effective Nov. 3, and of the dissolution of WPB on that date, J. D. Small, newly named Administrator of Civilian Production Administration, which will succeed WPB, has outlined in detail the functions of the new agency.

"The War Production Board's task of production for war has been completed and WPB's record of accomplishment during the war years speaks for itself," Mr. Small said. "The Civilian Production Administration will take over, and will carry forward, those remaining WPB functions and controls that are required during the transition period of reconversion to accomplish the objectives laid down by the applicable federal statutes and executive orders of the President.

"It will use its authorized powers to expand the production of materials which are in short supply; limit the use of materials which are still scarce; restrict the accumulation of inventories so as to avoid speculation, hoarding, and unbalanced distribution which would curtail total production; grant priority assistance to break bottlenecks which would impede the reconversion process; facilitate the fulfillment of relief and other essential export programs, and allocate scarce materials or facilities necessary for the production of low priced items essential to the continued success of the stabilization program."

"DOCTOR" TAKES OWN MEDICINE

Ex LPG Sales Manager "Prescribes" VULCAN For Hotel He Manages



Carleton Hotel's Modern LPG VULCAN Installation.

● When "Clem" Schlauder, formerly a star LPG sales manager, took over the management of the well-known Carleton Hotel at Cape Vincent, N. Y., he promptly took the "medicine" he had "prescribed" for others. He installed modern, heavy-duty VULCAN equipment for LP Gas. With these results: In first regular season after VULCAN installation: "81% increase in business—because of greater variety of food service . . . Major savings in manpower . . . Sufficient EXTRA business to pay for the new equipment.

What's "good medicine" for the Carleton Hotel can be "good medicine" for your prospects. Write for our complete Catalog; and for information on how we can help you win new sales, build bigger loads for LP Gas.

STANDARD GAS EQUIPMENT CORP.

Bayard & Hamburg Streets—Baltimore 30, Md.

Branch Offices: New York—Boston—Aurora, Ill.—Chicago—New Orleans—Los Angeles.

"OPA Price" Replaces Old "Ceiling Price" Mark

The words "OPA Price" instead of "Ceiling Price" soon will appear on a large part of the merchandise sold in retail stores, according to the Office of Price Administration.

Effective Oct. 15, 1945, any retailer of commodities other than food will be permitted to mark or tag goods with the words "OPA Price," whenever individual marking or tagging is required by an OPA price regulation. The price may be shown in this way on the commodity itself, its container or wrapper, depending on the provisions of the particular regulation.

To the shopper, the new wording will mean that the article is being sold at an OPA-approved price. Retailers may use the words "OPA Price" for goods priced exactly at the ceiling, or below the ceiling.

H. W. Edmund Elected President Pacific Coast Gas Association

At the 52nd annual meeting of the Pacific Coast Gas Association, "Convention in Print," held at Del Monte, Calif., on Oct. 3-4, officers for the ensuing year were elected by mail vote of the entire membership.

The following selections were made:

President, H. W. Edmund, Santa Cruz; vice president, LeRoy M. Edwards, Los Angeles; treasurer, D. G. Martin, San Francisco.

STATEMENT OF THE OWNERSHIP, MANAGEMENT, CIRCULATION, ETC., REQUIRED BY THE ACTS OF CONGRESS OF AUGUST 24, 1912, AND MARCH 3, 1933

Of BUTANE-PROPANE *News*, published monthly at Los Angeles, California, for October 1, 1945.

State of California, County of Los Angeles —ss.

Before me, a notary public in and for the State and county aforesaid, personally appeared Jay Jenkins, who, having been duly sworn according to law, deposes and says that he is the publisher of the BUTANE-PROPANE *News*, and that the following is, to the best of his knowledge and belief, a true statement of the ownership, management (and if a daily paper, the circulation), etc., of the aforesaid publication for the date shown in the above caption, required by the Act of August 24, 1912, as amended by the Act of March 3, 1933, embodied in section 537, Postal Laws and Regulations, printed on the reverse of this form, to wit:

1. That the names and addresses, of the publisher, editor, managing editor, and business managers are: Publisher, Jay Jenkins, 1709 W. 8th St., Los Angeles 14, Calif.; Editor, Lynn C. Denny, 1709 W. 8th St., Los Angeles 14, Calif.

2. That the owner is: (If owned by a corporation, its name and address must be stated and also immediately thereunder the names and addresses of stockholders owning or holding one per cent or more of total amount of stock. It not owned by a corporation, the names and addresses of the individual owners must be given. If owned by a firm, company, or other unincorporated concern, its name and address, as well as those of each individual member, must be given.)

Western Business Papers, Inc., 1709 W. 8th St., Los Angeles 14, Calif.; Jay E. Jenkins, Los Angeles, Calif.; James E. Jenkins, Los Angeles, Calif.; Eloise Jenkins, Los Angeles, Calif.; Arthur Rohman, Los Angeles, Calif.; Craig Espy, Dallas, Texas; George Finley, Santa Barbara, Calif.

3. That the known bondholders, mortgagees, and other security holders owning or holding 1 per cent or more of total amount of bonds, mortgages, or other securities are: (If there are none, so state.) None.

4. That the two paragraphs next above giving the names of the owners, stockholders, and security holders, if any, contain not only the list of stockholders and security holders as they appear upon the books of the company but also, in cases where the stockholder or security holder appears upon the books of the company as trustee or in any other fiduciary relation, the name of the person or corporation for whom such trustee is acting, is given; also that the said two paragraphs contain statements embracing affiant's full knowledge and belief as to the circumstances and conditions under which stockholders and security holders who do not appear upon the books of the company as trustees, hold stock and securities in a capacity other than that of a bona fide owner; and this affiant has no reason to believe that any other person, association, or corporation has any interest direct or indirect in the said stock, bonds, or other securities than as so stated by him.

5. That the average number of copies of each issue of this publication sold or distributed, through the mails or otherwise, to paid subscribers during the twelve months preceding the date shown is . . . (This information is required from daily publications only.)

JAY JENKINS (Signature of Publisher)

Sworn to and subscribed before me this 1st day of October, 1945.

[Seal] SUSAN McCONNELL

(My commission expires June 4, 1947.)

THE TRADE

A. B. CAMERON

James Mitchell, president of **Grand Home Appliance Co.** of Cleveland, manufacturer of Grand gas ranges, has announced the promotion of A. B. Cameron, to the position of sales manager, effective Oct. 6, replacing W. L. Marshall, resigned.

Mr. Cameron has been with Grand since July, 1944, as assistant sales manager in charge of product development. He is widely known in the gas range industry, having served for some 15 years as sales manager and manager of Philgas Division of Phillips Petroleum Co.

The Neptune Meter Co. announces the appointment to its sales staff of James C. Judge. He will represent the company in western Oregon and western Washington, making his headquarters at the Portland office.

In preparation for his new position Mr. Judge has just completed a training course at the company's factories in Long Island City, N. Y., and Los Angeles.

The Bastian-Blessing Co., Chicago, has been given the safety award of the Liberty Mutual Insurance Co. for achieving a high safety record in its branch of industry.

In their campaign to prevent accidents, Bastian-Blessing employes have, during a period of 32 months, previous to Aug. 1, reduced lost time frequency to a point 56% better than average for their industry.

It is a coincidence that Col. Ellsworth L. Mills, vice president of the company, is chairman of the Safety Committee of the Liquefied Petroleum Gas Association and a leader in safety efforts within the B-P Gas industry.

Roy A. Bass has recently been appointed director of distribution of **Dresser Industries, Inc.,** Cleveland, Ohio, a new post. Dresser Industries is the parent organization of 14 companies serving oil, gas and industrial markets and has 22 plants located throughout the country.

In this position Mr. Bass will be responsible for the national program of Dresser and its member companies in the establishment and expansion of distribution in industrial centers.

A contest which should serve to greatly solidify the position of cooking-by-gas in the modern home has been announced by the **American Stove Co.**

This contest, which is unique in that it represents the first time a manufacturer has offered the ultimate user an opportunity to submit concrete, over-all suggestions covering future design of a home appliance, is open to the general public and features $18,000 in cash prizes, with the first prize, $5000; second prize, $3000; third prize, $2000; three prizes of $1000 each, and 5 prizes of $500 each.

Contestants (anyone residing within the continental United States may enter) are required to submit designs

The Viking factory, which has been devoted 90% to producing pumps for the armed forces, is being reconverted to civilian production just as rapidly as possible.

You should note a gradual but substantial increase in Viking pumps available for your industry by November 1st. This picture should be considerably brighter by January 1st, 1946.

Write today for Bulletin Series 2300B which describes and illustrates Viking Rotary Pumps widely used in the butane-propane industry. It will be sent FREE by return mail.

★

VIKING PUMP COMPANY
CEDAR FALLS, IOWA

for the "Gas Range of Tomorrow." The "Architectural Forum" is acting as sponsor, with George Nelson, of the American Institute of Architects, as professional advisor.

Competition booklets, which also incorporate the basic technical data required in initiating a design, may be obtained free of charge by writing to George Nelson, A.I.A., c/o The Architectural Forum, Department P-1, Empire State Bldg., New York 1, mentioning the "Magic Chef" design contest.

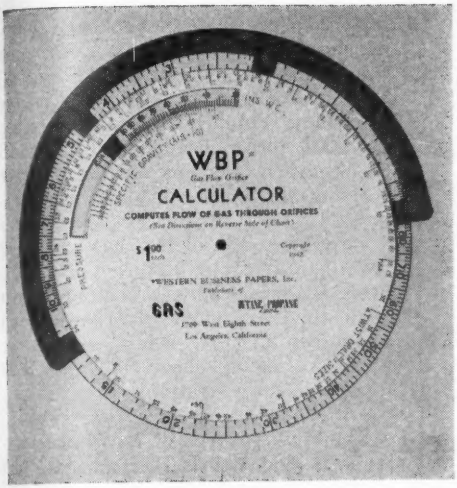
After four and one-half years in the armed forces, H. E. Ferrill has returned to **Kerotest Manufacturing Co.**, Pittsburgh, as sales and development engineer of the brass division, according to an announcement by George R. Allen, general sales manager of the Kerotest brass division.

J. P. Morley, president of **Bastian-Morley Co.**, Laporte, Ind., announces several changes and additions to personnel in furtherance of company plans for postwar expansion. Bastian - Morley manufactures Crane water heaters and Crane Basmor boilers, distributed nationally by Crane Co., Chicago.

ED. J. CAREY

Two additions have been made to the executive staff. Ed J. Carey has been made vice president and general manager. He has been with the company 23 years, the past 13 years as West Coast manager.

Ray J. Rodier, who has been assistant to the president and has had general direction of production, purchas-



GAS FLOW ORIFICE CALCULATOR

Invaluable to LP-Gas Engineers, Shop Men, Domestic Appliance Service Departments, LP-Gas Appliance Manufacturers, and All Others Who Need to Check or Determine LP-Gas Orifice Sizes.

- **Easy to Use and Carry**
- **No Need for Calculations**
- **No Reference to Tables**
- **Just Set Scales and Read**

Ever had to convert an appliance from manufactured or natural gas to LP-Gas and needed to know what orifice size to install? Ever had to estimate how much gas a burner could handle? Ever had to convert B.t.u. per hr. to cu. ft. per hr., or vice-versa? Ever had to know the B.t.u. input load of an appliance or industrial burner? With the Gas Flow Orifice Calculator you can quickly and accurately work out all these and many other problems.

Checks all factors relative to orifice sizing for gases from 300 B.t.u. to 3300 B.t.u. at pressures from .5-ins. to 15-ins. water pressure. Determines the flow of orifices from sizes 1 to 75 number drills, from sizes A to Z in letter drills, and from sizes 2/64 to 32/64 in fraction drills.

Priced for quantity purchase to enable you to obtain a sufficient number for everyone in your organization concerned with orifice sizing. Privilege to return within 10 days, for any reason, further assures your satisfaction. We pay postage on orders accompanied by remittance. Add 2½% sales tax on California orders; 10% excise tax on Canadian orders.

ORDER TODAY . . .

BUTANE-PROPANE News, Publishers
1709 West 8th Street, Los Angeles 14, Calif.

SPECIAL OFFER
25% DISCOUNT ON ALL ORDERS OF 25 OR MORE.

$1.00 EACH

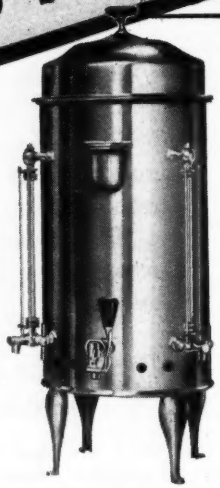
Gentlemen: Please send me.....W.B.P. Gas Flow Orifice Calculators for which I am enclosing my check (or money order) for $.....

Name.....**Position**.....

Company.....

Address.....**City and State**.....

You Profit Two Ways With This
LOAD BUILDER



BLICKMAN
Stainless Steel
COFFEE URN

• Take advantage of the long pent-up demand for new commercial cooking appliances. Here's how you profit two ways:

1. Profit by selling these nationally-known Blickman coffee urns, designed especially for use with LP Gas. Will build customer goodwill through years of low-cost trouble-free operation.

2. Profit through added LP Gas sales in the fertile commercial cooking and food-serving market.

Catalogs showing complete line will soon be available. Every item is an LPG load-builder.

S. BLICKMAN, INC.
Manufacturers of Food Service Equipment
2111 Gregory Ave. • WEEHAWKEN, N. J.

ing, inspection, personnel and engineering, is now vice president in charge of manufacturing. James V. Irvin moves up to assistant to the president; Paul H. Mortimer becomes assistant to Mr. Rodier, and Frank H. Stockhausen becomes plastic engineer for the newly created plastics department.

Laurence T. Tegler has returned from the army to become chief engineer. He was with the company from 1938 to 1942, leaving to accept an army commission. As a captain, he was executive officer on the B-29 flight engineer training program.

The Perfex Corp., of Milwaukee, announces that Curtis H. Soderberg has resumed his pre-war duties as manager of its Philadelphia office.

Mr. Soderberg, who has been associated with the heating industry for the past 17 years, had been located in the Milwaukee office since July, 1942, where he served as manager of the priorities department and also as liaison man for development engineering.

Col. Alan P. Tappan, vice president of the Tappan Stove Co., has been elected president of the firm to succeed Paul R. Tappan who has been appointed chairman of the executive committee, it has been announced by the board of directors.

COL. A .P. TAPPAN

A veteran of both world wars, Colonel Tappan returned to prewar duties on Sept. 13, as vice president and general manager. He is now on terminal leave, which expires Nov. 15.

The directors also announced that

SATURATION ADVERTISING

WILL BOOST YOUR SALES VOLUME . . . AS A DAY & NIGHT DEALER

DAY & NIGHT Manufacturing Company is expanding its Dealer Organization in the Butane-Propane field. Those who qualify as DAY & NIGHT dealers gain the tremendous selling impact of DAY & NIGHT'S blanket advertising coverage.

Radio . . Consumer magazines . . Trade journals . . Mailings
Dealer displays . . Other point-of-sale material.

The DAY & NIGHT "steamroller" of advertising-selling power will pave the way to greater profit for you, as a DAY & NIGHT dealer. To become a DAY & NIGHT dealer, get in touch with your jobber now. If he does not handle DAY & NIGHT products, write us direct.

DAY & NIGHT

Water Heaters
Wall Heaters
Panelrays
Cabinet Heaters
Portable Heaters

Gas Cabinet Heaters
Combine radiating and circulating heat. Conveniently portable; efficient and economical heaters. A.G.A. approved for LPG operation.

AMERICA'S FINEST TODAY . . . GREATEST TOMORROW

DAY & NIGHT MANUFACTURING CO.
MONROVIA • CALIFORNIA
One of the Dresser Industries

A. C. Rhoads, treasurer; R. M. Lamb, former plant superintendent; and W. Richard Tappan, former war products manager, have been named vice presidents.

Keith B. Miller, sales manager for Tappan, has announced the appointment of Donald S. Sharp, director of retail sales training, as assistant sales manager.

A. F. Rice has been appointed manager of appliance sales, Pacific Coast division, **Rheem Manufacturing Co.**, with headquarters in Los Angeles. Mr. Rice's territory consists of California, Arizona, Utah, Montana, Idaho, Nevada, Oregon and Washington.

Mr. Rice previously held positions, since 1920, with Cribben Sexton Co., Los Angeles, as branch manager; general manager, Western Stove Co., Culver City, Calif.; sales manager, H. R. Basford Co., Los Angeles and San Francisco; manager, market division, Southern California Gas Co., Los Angeles, and general manager, Occidental Stove Co., San Francisco.

J. Harold Merrick has been elected a vice president of **Rheem Manufacturing Co.**

Mr. Merrick joined the Rheem organization in 1943 as the company's general attorney and recently was named president of a newly-formed subsidiary, Rheem Manufacturing Company of Brazil, Inc.

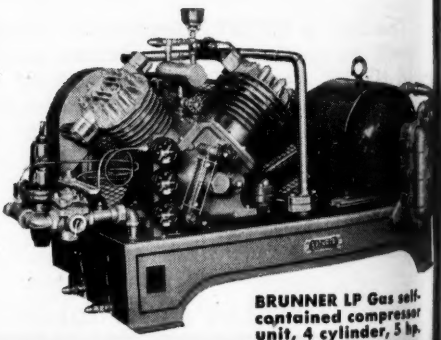
Servel Inc. has been given a certificate of merit for the excellence of the company's annual report to employes and stockholders by "Financial World," national investment weekly.

The companies chosen to be included in the final judging were selected from

500 to 1000 lbs. LP Gas saved

per tank car wherever Brunner units operate

Liquid Petroleum Gas operators using the Brunner LP Gas Unit recover 500 to 1000 lbs. of gas from every tank car unloaded. This saving alone quickly pays for the initial cost of the Brunner self-contained unit. And because LP Gas is a necessity in many defense areas, this gas saving is important as a conservation measure.



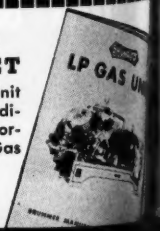
BRUNNER LP Gas self-contained compressor unit, 4 cylinder, 5 hp.

BRUNNER MANUFACTURING CO.
UTICA 1, NEW YORK, U. S. A.

ARMY E NAVY
BRUNNER
For over 37 years the Symbol of Quality

WRITE FOR THIS NEW FREE BOOKLET

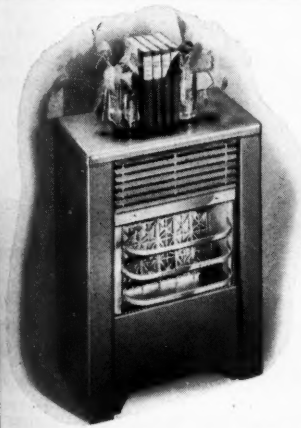
It describes the Brunner LP Gas Unit and contains more illustrations, diagrams, tables and valuable information on the handling of LP Gas than any booklet ever issued.



OUR 60th YEAR
OF DEPENDABLE SERVICE

DESIGNERS and
FABRICATORS of
A COMPLETE "MOSCO" LINE
OF LP-GAS CONTAINERS

MOSHER STEEL CO.
DALLAS HOUSTON TYLER



FEATURES THAT SELL

A.G.A. Approval, Hi-Crown Burners, Automatic Lighting, Syphonaire Chassis, and Air Insulated Cabinets are features your customers want. Finer —Safer heaters, yet priced unbelievably LOW. Write for literature.

DEARBORN
WORLD'S FINEST...SAFEST
L. P. G. GAS HEATERS

A complete line of Vented and Unvented Quality heaters. Their Ultra Smart Appearance, Outstanding L.P.G. Performance and many Exclusive Features create unprecedented user enthusiasm. You are assured satisfied customers and decidedly lower service costs when you sell this fine line.

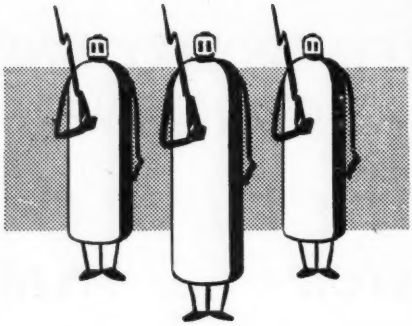
BUT. NAT.
PRO. MFG.
MIX. GAS.

FAMOUS HI-CROWN BURNER
BLUE FLAME PILOT LIGHT

Leading L.P.G. Distributors from coast to coast rate it the finest of all burners for Butane. It "performs" without coaxing, constant cleaning or adjusting. Its quiet, odorless operation, great flexibility and reserve capacity insures your customers being completely satisfied.

DEARBORN STOVE CO.
3256 Milwaukee Ave. CHICAGO, ILL.
3625 S. Grand Ave. LOS ANGELES, CALIF.

For Home, Farm, Store, Shop



We don't know how many uses you have found for LP-Gases in the past, but from now on, there will be increasing demand for Butane and Propane for a growing number of civilian needs. For home and farm, garage, for store, machine shop and industrial plant—for a multitude of uses for heat and power.

Sinclair LP-Gases offer new and expanded possibilities to aggressive distributors in prewar and postwar markets. Why not discuss your future plans with us?

SINCLAIR PRAIRIE OIL COMPANY

Liquefied Petroleum Gas Division

Sinclair Bldg. Tulsa, Oklahoma

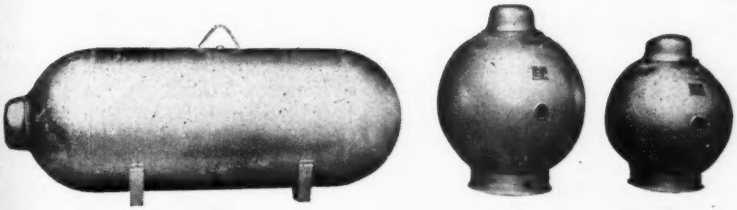
E. V. Ekman, left, Servel, Inc., and Weston Smith, vice president in charge of Annual Survey, are shown chatting after Mr. Ekman received the industrial "Oscar" at the "Financial World's" Annual Report Awards dinner at the Waldorf-Astoria, Oct. 2.

2500 corporations who submitted annual reports. All of these were judged on the basis of financial, statistical, editorial content, format, typography, and illustration.

E. J. Shermire, sales manager of "Garland" commercial equipment, **Detroit-Michigan Stove Co.**, died suddenly Oct. 3 in Birmingham, Ala.

Mr. Shermire became associated with Detroit-Michigan Stove Co. in 1936 as a district manager. In May, 1939, he was appointed sales manager. He was born March 26, 1899. Funeral services were held in St. Louis.

A three-story brick and concrete addition to the **Coleman Co., Inc.**, factory in Wichita, Kans., will add 27,000 sq. ft. of floor space to facilities now devoted to the manufacture of Coleman major home heating appliances. The building will be completed by Jan. 1.



500 GAL. 220 GAL. 130 GAL.

SMALL STORAGE DOMESTIC STORAGE
ATTRACTIVE APPEARING SUPERIOR
BUILT TANKS

For Tanks to Meet Your Specific Needs,
Information, Engineering or Estimations
Call or Write

SUPERIOR TANK & CONSTRUCTION COMPANY

6155 S. EASTERN AVE. AN 4157 LOS ANGELES, CALIF.

Yes... **REZNOR UNIT HEATERS**

Q. Are Reznor Unit Heaters designed for heating more than one type of building?

A. Yes! They can be used for all types of buildings.

In other words, if you have a space to be heated, you can use Reznor Unit Heaters. They provide safe, clean heat and you need no auxiliary equipment or firemen ... turns off and on as needed ... no waste ... pay only for fuel used.

Made in 3 types (fan, blower, and duct) and there are 9 different sizes of each type.

REZNOR MFG. CO. **REZNOR** JAMES ST., MERCER, PA.
"GAS HEATERS EXCLUSIVELY SINCE 1888"

Surplus Property Administration Has Four Major Problems

Reorganization of the Surplus Property Administration to speed the disposal of billions of dollars of surplus property was announced Oct. 1 by W. Stuart Symington, newly-appointed Surplus Property Administrator, at the conclusion of the ceremony of taking the oath of office.

"At this time, four broad problems are paramount: Making it simple for veterans to exercise their rights to preference in buying surplus goods for the establishment and maintenance of their own independent businesses; expediting the clearance of government property from plants; and more effectively and rapidly moving surplus goods with special emphasis on the needs of preferred groups under the Act—Federal, State and local governments, tax-exempt educational and medical institutions, farmers, and small business, and the speedy disposal of war plants and their machine tools for peace time operations," Mr. Symington stated.

Under an order of Oct. 10, sales of surplus goods to veterans were greatly simplified and eased.

Survey Favors Gas Range Over Electric 22-to-1

It's the gas range 22 to 1, according to a survey made by AGA among utilities representing approximately one-half of the 20,000,000 gas meters in the U. S.

The 141 companies who supplied information estimated that there are 488,080 electric ranges in the territories where they serve 10,868,937 gas customers. On the basis of these figures, 4.54 potential gas cooking customers use electric ranges.

CLIP THIS AND MAIL TODAY

if you are not a subscriber to

BUTANE-PROPANE NEWS

SUBSCRIPTION ORDER

Enter my subscription to BUTANE-PROPANE NEWS to begin with the next issue.

1 YEAR $1.50 ☐ **3 YEARS $2.50** ☐

Check enclosed ☐ *Please send bill* ☐

NAME_____ POSITION_____

COMPANY_____

STREET CITY ZONE STATE

DOWNINGTOWN EXPERIENCE
. . . in Propane Tank Fabrication

This propane tank, 51 feet 3 inches overall length with an inside diameter of 94 inches, is an example of the tanks Downingtown is turning out for LP-Gas suppliers.

Our specialized knowledge of the design, specification of materials and fabrication of these tanks, insures the safety and long life of the completed job . . . equipped with valves and ready to install. Built to A.S.M.E. standards and in compliance with all Hartford requirements.

Now is the time to plan for the expansion of storage facilities to take care of increased demand for LP-Gas service. Our engineering consultation is available to aid you in the plans and specifications for definite jobs.

DOWNINGTOWN IRON WORKS
DOWNINGTOWN, PA.
WELDED and RIVETED PRODUCTS

Butane & Propane

Carter

Carter high quality Butane and Propane are unsurpassed as domestic and industrial fuels. Bulk loading points, St. Elmo, Illinois, Seminole and Stonewall, Oklahoma. Wholesale only. Your inquiries are solicited.

THE CARTER OIL COMPANY
TULSA, OKLAHOMA

LIQUEFIED PETROLEUM GAS

Look forward confidently with CITIES SERVICE as an experienced source of LPG.

•

CITIES SERVICE is expanding its production of these products.

•

CITIES SERVICE is increasing its fleet of LPG tank cars.

•

CITIES SERVICE
means
GOOD SERVICE

•

CITIES
SERVICE OIL CO.
(Delaware)

Bartlesville, Okla.—Chicago, Ill.

•

Other Sales Offices
CLEVELAND KANSAS CITY
ST. PAUL TORONTO

WPB Expert Joins Cooking, Heating Appliance Group

Carl Schaffer, formerly chief of the Appliance Branch, Plumbing and Heating Division, War Production Board, joined the staff of the Institute of Cooking and Heating Appliance Manufacturers as an assistant to Samuel Dunckel, the managing director, on Oct. 1.

In his new position with the Institute, Mr. Schaffer will maintain his contacts with stove manufacturers through regional and committee meetings, will handle special statistical surveys, and will play an important part in the trade association's program for the reconversion period.

Craig Espy Returns To Dallas To Represent California Firm

Craig Espy, Pittsburgh district manager of "The Oil and Gas Journal," and at one time vice president of Western Business Papers, Inc., publishers of "Butane-Propane News," has resigned from the Journal, effective Oct. 15, to become Southwestern sales representative, at Dallas, Texas, of California Pellet Mill Co., of San Francisco.

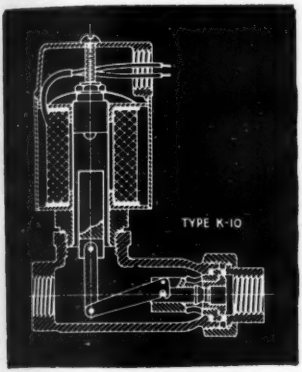
Mr. Espy had his headquarters in Dallas for several years prior to locating in Pittsburgh.

Controls Lifted From Construction and Air Travel

All controls came off construction and airplane travel Oct. 15 as the nation entered its third month of peace.

Lifting of WPB's ban on civilian construction was expected to stimulate business expansion and provide a new source of jobs for the country's rising total of unemployed.

It came as reconversion officials voiced general satisfaction with the



K-10 Series Magnetic Lever Valve, normally closed type, showing lever action design.

General Controls K-10 Series

Magnetic Lever Values

Six Times The Power

The exclusive design of General Controls K-10 Series Valves makes them many times more powerful than ordinary solenoids. They are quiet, two-wire, current failure valves of packless construction, designed to handle air, gas, water, light and heavy oils, and steam. Positive opening and tight shut-off assured. Normally open, or normally closed. Pressures up to 1,000 pounds. Available any voltage, A.C. or D.C., up to 1¼" i.p.s. Port sizes to ⅝".

Write Nearest Factory Branch, or Distributor, or direct, for Catalog 52-B

GENERAL CONTROLS

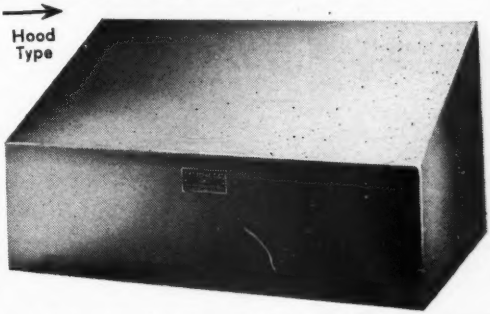
801 ALLEN AVENUE GLENDALE 1, CALIF.

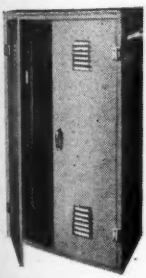
FACTORY BRANCHES: Philadelphia - Atlanta - Boston - Chicago - Dallas Kansas City - New York - Denver - Detroit - Cleveland - Pittsburgh Houston - Seattle - San Francisco - DISTRIBUTORS IN PRINCIPAL CITIES

OXFORD Bottled Gas CABINETS

Hood Type and Full size. Sturdily constructed of heavy metal with protective coating of paint or galvanized to insure rust resistance. Write for prices and detail.

Hood Type





Full Size Cabinet

Thousands of Oxford Bottled Gas Cabinets, Full Size and Hood Types, are in use in many parts of the country giving satisfactory service over many years.

Liquid Propane Vaporizer

Insures vaporized gas in any degree of cold weather. Outstanding superiority is that it is installed OUTSIDE the tank—always accessible. Write for details and prices.

The Oxford Company • Oxford, Penna

progress thus far made, while cautioning at the same time that the upsurge of labor strife would delay the back-to-normal process.

High unemployment is forecast through 1946, since industrial expansion cannot keep pace with the rapid return of veterans. However, about 700,000 jobs are looking for takers and the daily strike total covers around 450,000.

The removal of passenger priorities on domestic and foreign air lines knocked out one of the few remaining controls over transportation.

Still on the books are tire rationing, which the rubber industry hopes to see ended by New Year's; and truck rationing, which ends Dec. 1. Curbs on home delivery service were erased Nov. 1.

Revocation of WPB's familiar "Order L-41," the construction ba cleared the way for the building o an estimated 500,000 new houses ne year, and for the building of 12,500, 000 in the next ten years—the gover ment's goal.

It also removed the barriers fo millions of dollars worth of hote apartment, store, theater and offic building construction.

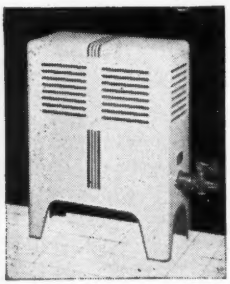
Preference Ratings Given New Designations

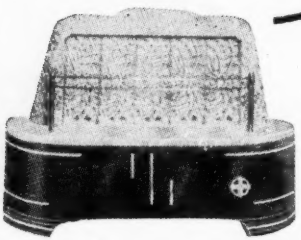
To eliminate controls made obsole by the new War Production Boa rating system and the expiration o the Controlled Materials Plan, whic became effective Sept. 30, WP amended Priorities Regulation 1 o Oct. 1.

Reference to defense orders and t

Armstrong

QUALITY SINCE 1899





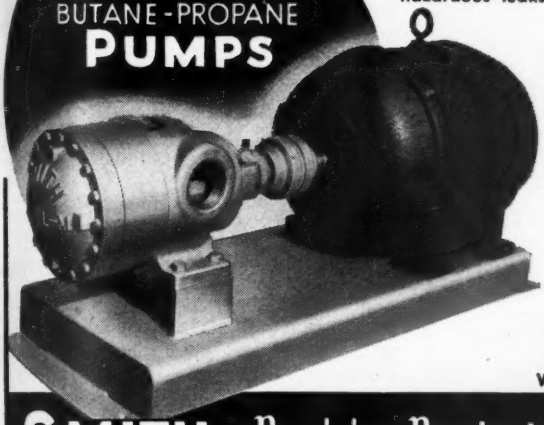
No. 10-C Bathroom Heater —1-pc. body finished in white porcelain enamel. Cast iron burner, adjustable air mixers. 14½" high.
No. 690 Radiant Heater (center) — Finished in brown vitreous enamel. 17¾" high. 20,000 or 24,000 B.T.U.

Through the war years our reconversion plans have been set for a rapid turnover to civilian goods. We're now in full swing producing these popular heaters. Place your order immediately for earliest delivery.

Armstrong Products Corp.
DEPT. BP HUNTINGTON, W. VIRGINIA

No. 900 Circulating Radiant Heater—D signed for proper co bustion to produce b radiant and circulati heat. Brown porcela enamel finish. 19" hig 18,000 or 28,000 B.T.

SMITH
BUTANE-PROPANE
PUMPS



Especially designed for handling LP Gas. Balanced gear construction reduces internal wear in the handling of non-lubricating fluids. Fluid sealed packing box prevents hazardous leaks.

Because of dependable service, SMITH PUMPS have become standard equipment wherever they have once been used. They develop ample pressure for fast transfer or for bottling service.

Illustrated is the new Model M-3, with 3" pipe size. Capacity 100 GPM. Direct connected to 5 HP explosion-proof motor. Other models of correct capacity and design for every L. P. G. use.

WRITE FOR FULL INFORMATION

SMITH Precision Products COMPANY

1135 Mission Street South Pasadena, Calif.

Gas Cylinder Truck —
Easy Handling — Saves Lawns

- ALSO FOR STOVES, BOXES, CRATES
- PNEUMATIC RUBBER TIRES AVAILABLE NOW

An all purpose, one man truck for moving both cylinders and appliances. No more back-breaking lifting, either. Tapered body gives operator ample room between handles. Cradle construction accommodates any size cylinder up to 100 pound capacity. Wide Bottom flanges give support for appliances. Web strap (optional) holds appliance rigidly. Rounded handle grips permit skidding from end of delivery truck. Time saving, labor saving, cost cutting. Available now.

Write for prices and folder.

THOMAS TRUCK & CASTER COMPANY

1100 Mississippi River, Keokuk, Ia.

Top Performance!

BUTANE-PROPANE EQUIPMENT

Fill your L-P Gas needs now . . with equipment engineered for top performance and efficiency. Consult us about your particular problems.

•

ALSO SEE US FOR . . .
PUMPS METERS HOSE VALVES
REGULATORS FITTINGS

ACME EQUIPMENT CORP.
Butane

313-317 So. Pearl St. Dallas 1 Texas

Write for Information on

Utility

GAS SYSTEMS

Quotations on any type or size pressure vessel to meet your specifications.

We specialize in truck and transport tanks.

•

Butane Equipment Co., Inc.

Box 1451

DALLAS TEXAS

specific authorizations rated AA-5 were eliminated from the amended PR-1.

The order of precedence of preference ratings in the regulation was reworded to read: AAA, MM and CC, in conformity with the simplified priorities rating system established in PR-29. The AAA rating is for emergencies, MM for military needs, and CC for needs of civilian industry in special cases.

Industry Is Attempting To Meet Long, Pent-Up Demand

With the road back to full civilian production appreciably smoothed by months of hard preliminary work by WPB and other government procurement agencies, industry is now ready to meet the long pent-up demand for civilian goods by doubling its production records of 1939, Chairman J. A. Krug said recently in presenting his second report on the "Progress of Reconversion."

Actual August, 1945, civilian production of these selected and product industries was up to 51% of the average month base period of 1939; September production is estimated to be 60%; the forecast for December, 1945, is for 153%; and for June, 1946, it is expected to be 238% of the 1939 base figure.

Motorists Need Not Pay Excess for Aviation Gasoline

Ceiling prices established for aviation gasoline apply only when the gasoline is sold for aviation uses and do not apply when it is sold to motorists for use in automobiles, the Office of Price Administration announced Oct. 15.

When aviation gasoline is sold to motorists, the price cannot be higher than the seller's ceiling for premium gasoline. OPA declared.

BUEHLER

Tank and Welding Works

•

Manufacturers of Tanks, Welded and Pressed Steel Products

•

5000 Pacific Boulevard

LOS ANGELES 11, CALIFORNIA

GEC

GAS EQUIPMENT COMPANY, INC.

GAS EQUIPMENT CO., INC.

2620 South Ervay Street, Dallas, Texas

GAS EQUIPMENT SUPPLY CO.

DISTRIBUTORS FOR

REGO

LP GAS EQUIPMENT

Hackney

BUTANE PROPANE CYLINDERS

L.C. RONEY INC.

HOT WATER

As You Like It

ALL SIZES and PRICES

'The QUALITY LINE'

TURN ON THE FAUCET

A. G. A. APPROVED

AMERICAN GAS ASSOCIATION APPROVED

UNITED STATES HEATERS

will do the rest . . . !

COMPTON, CALIFORNIA

For Safety and Economy

ETHYL MERCAPTAN

Purified

The ACCEPTED standard odorant for liquefied petroleum gases.

MALLINCKRODT CHEMICAL WORKS

ST. LOUIS NEW YORK

CLASSIFIED

Classified advertising is set in 6-point type, without border or display, at the rate of 10 cents per word per insertion; minimum charge per insertion $2. Box numbers for replies count as 5 words. Count as a word each one letter word and each group of figures. Classified advertising is only accepted when payment accompanies order. Copy and payment must reach publisher's office prior to 10th of month preceding publication.

SITUATIONS WANTED

EXPERIENCED AND QUALIFIED, HEAD serviceman seeks position as manager of town plant or bulk plant. Managerial experience. Write Box 800, BUTANE-PROPANE *News*, 1709 W. 8th St., Los Angeles 14, California.

HELP WANTED

EXPERIENCED L.P.G. ENGINEER TO MANage six propane bulk plants, train personnel, etc. Unusual opportunity. Attractive earnings. Veteran preferred. Ruralgas Company, 1808 Grand Ave., Kansas City 8, Missouri.

WELL ESTABLISHED DISTRIBUTOR OF L-P Gas to domestic, industrial and motor fuel markets has openings for experienced men in L-P Gas sales, installation and operation. Write to Box 790, BUTANE-PROPANE *News*, 1709 W. 8th St., Los Angeles 14, California.

EQUIPMENT FOR SALE

FOR SALE: 2850 GALLON BUTANE SEMItanker, completely reconditioned, valved and equipped including pump, together with 1941 White tractor model WA-26 Super Power. Westinghouse air brakes. Write Lassen Propane Co., Susanville, California.

FOR SALE: 1 MODEL 200, 2 INCH, SMITH Butane-Propane pump, complete with 3 H.P. vapor proof, explosion proof, GE 50 cycle motor, standard Smith base; Crouse-Hinds starting switch. $300.00. Mechanical condition guaranteed. Home Gas Company, Ontario, Calif.

FOR SALE: OLD BLAUGAS CYLINDERS complete with used Bastian-Blessing valves and caps. Hold 25 lbs. of propane, test 3000 lbs. Write Omaha Blaugas Company, 4220 North 27th Street, Omaha 11, Nebraska.

EQUIPMENT WANTED

WANTED: 15,000 GALLON CAPACITY OR larger Propane ASME 200 pound pressure tank. Send specifications and price. Montana Butane Gas Company, Billings, Montana.

FREE TO WAR VETERANS

If you are a veteran of World War No. 2, you may run a "Situation Wanted" classified ad in this column three consecutive months without charge.

Send in your copy!

Standard of N. J. Plans New Research Centers

Through its president, Eugene Holman, Standard Oil Co. (N. J.), recently announced its contemplated plans for the construction of two major petroleum research centers to aid its scientists in technical research. These centers will be located at Linden, N. J., and at Baton Rouge, La., at both of which places Standard Oil Development Co., central technical organization of the Jersey Standard group, already has large laboratories.

Not to be devoted entirely to petroleum research, the new centers will also carry out work on the extension of sources of supply of oil products, basic studies on the application of catalytic processes to derive chemical raw materials from petroleum, and low-temperature polymerization.

By-Product Coal Shortage Spurs Water Gas Manufacture

In order to conserve a critically short supply of by-product coal from which gas is manufactured, the War Production Board on Oct. 10 directed gas manufacturers to put into maximum operation at once all facilities for the production of water gas or gas manufactured from oil and coke.

HOW TO REDUCE YOUR WASTE LINE

CENTURY

Butane-propane carburetion will cut your Engine Costs for:

- Repairs and Down-time
- Oil
- Fuel

and give you greater power, and dependable operation thru a product backed by over 18 years manufacturing experience of these products.

Century Gas Equipment Co.

11188 Long Beach Blvd.
Lynwood California

ELLIS

BU-POWER MANIFOLDS

ARE NOW ACCEPTED AS STANDARD EQUIPMENT ON ALL TYPES BUTANE-PROPANE ENGINE CONVERSIONS

FEATURING:

- 73% more volume
- 60% lower operating temperatures
- Perfect distribution to all cylinders

ELLIS MANIFOLD CO.

2514 Santa Ana Street
Huntington Park, California
Phone: LAfayette 0664

BRODIE METERS

SAVE
★ ERRORS
★ LOSSES
★ DELAYS
★ EQUIPMENT

RALPH N. BRODIE CO., INC.
955 - 61st Street, Oakland (8) California • Cable Address "BRODICO" • Division Offices. Chrysler Bldg., New York City
59 E. Van Buren, Chicago • 302 South Pearl St., Dallas, Texas
Representatives and Stocks in All Principal Cities

Heat-Control at the STEAM TABLE

SAVES FOOD and FUEL

Helps Sell Restaurants On L.P.G. Service

ROBERTSHAW THERMOSTAT COMPANY
Youngwood, Pa.

COMMERCIAL & INDUSTRIAL DIVISION

ADVERTISERS